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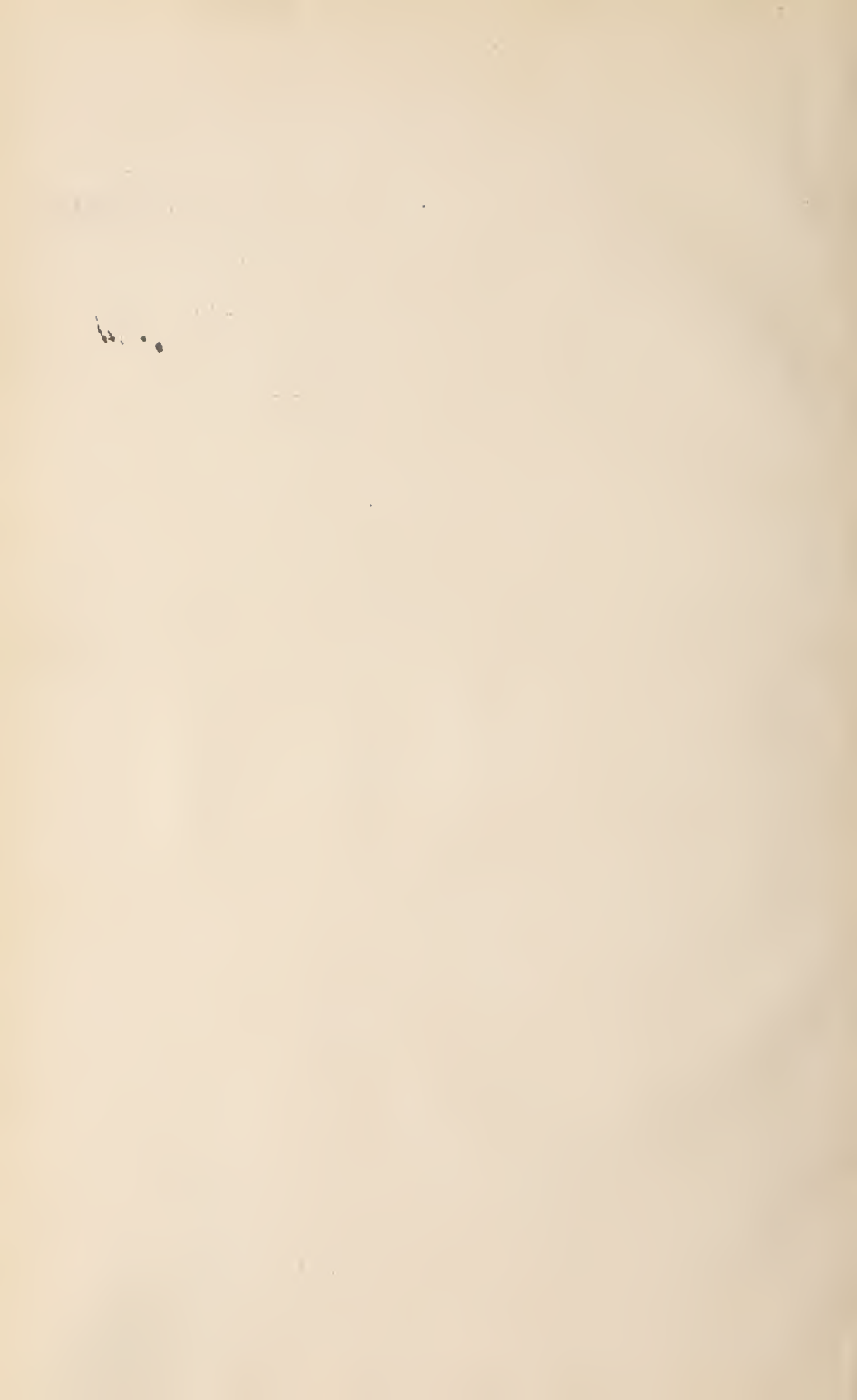
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The Journal

OF THE

South Carolina Medical Association

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STATE BOARD OF HEALTH NUMBER

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ARCHIBALD E. BAKER, M. D., Surgeon in Charge.



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Annual Subscription, \$2.00. EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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EDITORIAL

TRI-STATE MEETS AT RICHMOND

Laurens, S. C., Jan. 9, 1919.

Dear Doctor:

The Twenty-first Annual Session of the Tri-State Medical Association of the Carolinas and Virginia will be held at Richmond, Va., February 19-20, 1919. This will be the first big medical meeting since hostilities ceased and quite a number of our men in service will be present and a most enjoyable and profitable time is expected. Richmond meetings are always well attended and your presence with a paper is urged.

The Executive Council voted that the 1918 Transactions be published with 1919, a war saving measure, which makes it possible to permit dues of our men in military service—1918.

Please send title at your earliest to the Secretary-Treasurer Dr. Hughes.

For further information address either Dr. J. Allison Hodges, Chairman Committee of Arrangements, Richmond, Va., or the Secretary.

Sincerely,

ROBT. S. CATHCART,

President, Charleston, S. C.

ROLFE E. HUGHES,

Secretary-Treas., Laurens, S. C.

PROMPT RESPONSE TO CALL FOR PAPERS

We thank several loyal friends of the Journal for a prompt response with papers for publication in the near future. Some of these most excellent papers will begin to appear in Febru-

ary. We are delighted to have a report of several societies also.

STATE BOARD OF HEALTH NUMBER

This issue of the Journal is devoted to reports of the work of the State Board of Health for 1918. It is of more than ordinary interest and we urge our readers to give careful thought to the information presented. Dr. James A. Hayne, State Health Officer and President of the South Carolina Medical Association, has guided the Public Health policies of our State with a masterly hand in the past twelve months under most extraordinary conditions. In the February number we will continue publication of these reports.

DEATH OF DR. S. W. PRYOR

The State of December 28th contained an Editorial on the death of Dr. S. W. Pryor, of Chester, which expresses so clearly the esteem in which he was held in South Carolina that we copy it in full as follows:

"Not many men in South Carolina have made for themselves in the last quarter of a century so high a place in public regard as Dr. Stewart W. Pryor achieved in Chester, where, as a physician and surgeon, he spent his manhood, doing good on an ever enlarging scale. He was one of the pioneers of the extension of modern surgical practice in Upper South Carolina. It was not so long ago that most of the skilled surgeons in this State lived in Charleston—when there was not a hospital even in Columbia. In those

days it was necessary for patients requiring hospital accommodation to be taken to Charleston or out of the State. Dr. Pryor built a hospital in Chester at a time when the establishment of an institution of that kind in a small town called for a business courage not far removed from audacity. He saw the need of the people and resolved to fill it, disregarding the hazard of his means, and he devoted himself to the great work of relieving pain and disease with his whole heart and mind. The people scarcely are aware of the great benefits that have been conferred upon them by the physicians and surgeons whose enterprising spirit has been not less than their fine skill and unselfish zeal. Without hospitals, modern surgery would not exist. Now, nearly every town of four thousand or five thousand inhabitants has its hospital and that they have been multiplied so rapidly in recent years is due in a great measure to the vision and toil of men like the late Dr. S. C. Baker, of Sumter, and this benefactor his kind whose death is now mourned by the people of Chester and by thousands of others throughout the State, and especially in the Piedmont district.

OUR ADVERTISERS

We wish to impress upon the members of the South Carolina Medical Association the fact that we owe careful consideration of the claims of our advertisers. We carry several new ads this month and this patronage will depend upon the results obtained. We urge our readers to write these advertisers frequently for they are all high class.

ORIGINAL ARTICLES

ANNUAL REPORT STATE HEALTH OFFICER

By James A. Hayne, M. D.

THIS is the Thirty-ninth Annual Report of the Executive Committee of the State Board of Health, and is for the year ending December 31st, 1918.

This report is made in compliance with the Concurrent Resolution, which directs that every officer of the Departments of the State Government required by law to make a report to the General Assembly shall contain only concise statements of recommendations and of the transactions of the officer of the Department; and that no copy of any report, or document, or law, or proposed measure shall be made and printed at the expense of the State except what shall be necessary for the information of the General Assembly.

Executive Committee State Board of Health

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.....Charleston
D. B. Frontis, M. D.....Ridge Spring
C. C. Gambrell, M. D. (now Captain in
M. C. U. S. A.).....Abbeville
E. A. Hines, M. D.....Seneea
W. J. Burdell, M. D. (Captain in M. C.
U. S. A.).....Lugoff
Wm. Egleston, M. D. (Captain in M. C.
U. S. A.).....Hartsville
W. M. Lester, M. D.....Columbia
W. W. Dodson, Phg. D.....Greenville
S. M. Wolfe, Attorney General.....
.....Columbia

R. L. Osborne, Comptroller General...
.....Columbia
James A. Hayne, M. D. (First Lieut.
M. C. U. S. A.) Secretary and
State Health Officer....Columbia

Staff of South Carolina Department of Health Executive Department

James A. Hayne, M. D., Executive
Officer of State Board of Health.
J. P. Tompkins, Clerk.
John Roundtree, Janitor.

Department of Rural Community Work

*L. A. Riser, M. D. (Capt. M. C.
U. S. A.).....Director
E W. Grieshaber.....Stenographer
V. W. Brabham, M. D. (First Lieut.
M. C. U. S. A.)...Acting Director
*F. M. Routh, M. D. (First Lieut. M. C.
U. S. A.).....Field Director
C. H. Verner, M. D....Field Director
Karl L. Able, M. D....Field Director
*Robt. H. Folk, M. D...Field Director
D. D. Kirard, M. D....Field Director
S. F. Blakely, M. D....Field Director
Sanitary Inspectors and County Health

Nurses for Rural Community Work

Jas. P. Doyle.....Inspector
Wm. Bodie.....Inspector
Nobles Daniels.....Inspector
R. C. Roof.....Inspector
W. Gardner.....Inspector
Henry Perkins.....Inspector
Chas. Faris.....Inspector
H. F. Schiffley.....County Nurse
A. Fields.....County Nurse
A. J. Hill.....County Nurse
Lillian Mack.....County Nurse
Syrene Simons.....County Nurse
Nora Hamner.....County Nurse
Clara T. Bloom.....County Nurse

Note: *In service.

Laboratory Department

*F. A. Coward, M. D. (Capt. M. C. U. S. A.) Director.

Jas. R. Cain, Acting Director.

E. W. Ayer, Laboratory Assistant.

H. M. Smith, M. D., Assistant Bacteriologist.

M. C. Davis, Stenographer.

F. L. Parker, M. D., Chemist and Bacteriologist, Charleston.

Bureau of Vital Statistics

C. W. Miller, Chief Clerk.

P. T. Washington, Filing Clerk.

M. Lindsay, Index Clerk.

M. Currell, Stenographer.

M. Robottom, Transcript Clerk.

South Carolina Sanatorium

Ernest Cooper, M. D., Superintendent.

W. Rivers Claytor, M. D., Physician and Assistant Superintendent.

Clara Wood, Matron.

Carrie Spivey, Head Nurse.

A. J. Rembert, Field Secretary.

Four Pupil Nurses.

Servants.

Bureau of Venereal Diseases

C. V. Aiken, M. D., P. A. Surgeon, U. S. Public Health Service, Director.

Fannie Winter, Stenographer

Meetings

The Executive Committee of the State Board of Health, in addition to its regular quarterly meetings, held four called meetings.

The Board's Quarters

The Executive Department of the State Board of Health occupies rooms on the fifth floor of the Palmetto building.

The Laboratory remains in well arranged rooms furnished by the Uni-

versity of South Carolina, in LeConte College.

The Bureau of Vital Statistics is at the University of South Carolina in LeConte College.

The South Carolina Sanatorium for the treatment of Tuberculosis is at State Park, eight miles from Columbia.

Miscellaneous

All activities of State Departments for the year 1918 were overshadowed by the great fact that South Carolina, as a component part of the United States, was doing everything possible to win the great war. When our last annual report was being written this country had just begun to fight and camps for the Army were just being completed and laborers were still employed in carrying out these important works. Soldiers were flocking into the State from all the surrounding states. It was predicted that the next year would be a year that would call for all the resources of the Health Department to combat the numerous contagious diseases which we felt sure would arise from the changed conditions in this State. This proved to be a true prediction, for hardly had the year 1918 been born before the State Board of Health was confronted with a state-wide epidemic of Cerebro-Spinal Meningitis. Camp Jackson, situated near Columbia, suffered more than any other camp from this disease. Early in December, 1917, Cerebro-Spinal Meningitis made its appearance, following in the wake of a severe epidemic of Measles.

It is not becoming for this Department to criticize or to suggest what might have been done by the Army to prevent the infection of the civilian population of South Carolina. The fact remains that the civilian population did become infected; that this infection spread along the routes of the

railway lines and that but few counties in the State escaped the ravages of the disease. Had it not been for the able assistance of the U. S. Public Health Service in visiting the cases, administering serum, and taking cultures of the nose and throat to determine carriers, we do not know how many cases might have resulted. In another part of this volume we have a report of Cerebro-Spinal Meningitis. Suffice it to say that 171 persons died from this disease—this in contrast to thirty-three deaths in 1917 and twenty deaths in 1916.

The State Board of Health was called upon to furnish this serum. No extra appropriation had been made for the same but \$2,930.40 was spent out of the already insufficient appropriation for the control of communicable diseases.

After this epidemic was under control, it lasting for a period of about four months, there were no further serious epidemics until September 18th, when the State was overwhelmed by the pandemic of Influenza. A full report of this epidemic is also to be found in the following pages of this volume. It will serve its purpose as an object lesson to the General Assembly of how unprotected this State is against epidemics. Only two Counties in the State, Greenville and Spartanburg, have health officers, and all of the necessary adjuncts of a Department of Health, but rural communities have no constituted authorities to turn to when threatened with epidemics or when communicable diseases exist in large numbers. It has been the strenuous effort of the State Board of Health to bring to the minds of the people in the counties the necessity of Health Organizations. In Greenwood, Darlington, Orangeburg, and Lexington Counties, the forces that were engaged in rural sanitation, paid by the State,

County, and International Health Board, stopped all other work and did what they could in the Influenza situation. The State Health Officer, through the sheriffs of the various counties, was able to put on a quarantine which was effective—made effective however by the fears of the people and not because there was adequate machinery for carrying out the law. Over 3,000 men, women and children died—many, many more lives than were lost in the Army or in the Navy from South Carolina during this World War.

However, when we look back upon the epidemic which we have just passed through, certain facts stand out. One of the most striking of these is that when an epidemic threatens colleges and universities whose students can be kept on the campus and rigidly quarantine the students are safer there than in their homes, that the closing of these institutions should not be brought about except after the most careful consultation with the health authorities. Winthrop College, with approximately 1,000 girls, in the first out-break of Influenza did not have any severe cases and but few mild ones. The Citadel, which was closed as soon as the outbreak occurred, had a great many cases and these cases occurred almost as soon as the cadets reached their homes, they having evidently contracted the disease while en route on railway trains. They thus not only took the disease themselves but they conveyed it and spread it to the remotest parts of the State as the cadets come from every county in South Carolina. Another lesson that we learned was that this disease was carried principally by close contact on railway trains, spreading later to rural communities by contact in crowded stores, moving picture shows, etc.

Influenza still prevails in South

Carolina. It is estimated that there were 200,000 cases in the State. This leaves about 1,600,000 people who have not yet had the disease. It is feared that relaxations of precautions will continue to spread the disease.

We feel that the education of the children of this State is so necessary that schools should not be closed even though risk is run in allowing them to remain open. We feel that the people can do without theatres, moving picture shows, crowding in stores and can worship God without going to church. We, therefore recommend that the order of closing by a Board of Health in a city be first theatres and moving picture shows, next the prevention of over crowding in stores, next the closing of churches and finally the closing of schools if the epidemic still exists.

This year showed only forty-six deaths from Diphtheria out of a total number of 747 cases for the first nine months of the year. This is a very small number of cases and also indicates a small death rate. We attribute this striking reduction in deaths from diphtheria to the free distribution of Diphtheria Antitoxin to all citizens of South Carolina.

We are again glad to report that there have been no deaths from smallpox, this making two years without a death in this State.

It is also gratifying to note the decrease in the deaths from Pellagra which has shown a steady decrease since it first made its appearance. We are, however, surprised at this decrease as we were led to suppose that restrictions placed on food stuffs and properly balanced rations by the Food Commission would have resulted in the decrease in the number of deaths. Meat having been very high priced for the last year and meatless days having been the rule rather than the exception we cannot see how these

figures balance with the assumption of Dr. Goldberger, of the U. S. Public Health Service, that pellagra is a disease due entirely to an unbalanced ration. There were 497 deaths from Pellagra against 544 the year before when food stuffs were in great abundance in South Carolina. We believe, however, that the lowering of the death rate from Pellagra is due to a better understanding of the cause and cure of the disease and also because the death rate at the State Insane Asylum, which furnished a large number of the Pellagra deaths, is much lower under the present management.

We have had but seven deaths this year from Infantile Paralysis against eight deaths last year.

The death rate of Tuberculosis this year is slightly lower, there having been 1,326 deaths for the first nine months of the year. We are still doing what we can to educate the public in regard to Tuberculosis. We have sent a pamphlet on Tuberculosis entitled "What you should know about Tuberculosis" to every school in the State and requested that it be used as a text book in the high schools. The State Superintendent of Education has endorsed this plan and we hope that it will bring about a real education of the children in regard to this disease.

We are very proud of our State Sanatorium, situated eight miles from Columbia on a high, dry sand hill where the patients have the maximum of sunshine and are able to take the three essentials in the cure of this disease, namely, rest, sunshine, and good food. Dr. Cooper's report will be found elsewhere in this volume. We hope that the General Assembly will send a committee to visit this institution which has been pronounced by experts a model sanatorium in miniature. We believe that it is the best equipped sanatorium for the treatment

of Tuberculosis in the South. It can accommodate but fifty-six patients although its well lighted dining room will comfortably seat 100 people. We hope that the Legislature will allow us to perfect the plans that we have made for enlarging and maintaining this institution.

The negroes of South Carolina are raising a fund to build a sanatorium for the treatment of Tuberculosis among negroes, and ask that the Legislature appropriate an equal sum. Surely this modest request should be granted for unless we assist the colored race in stamping out Tuberculosis among themselves, we can never hope to eradicate it in the white race.

We wish to again call the Legislature's attention to the fact that the State Board of Health should have on its personnel a sanitary engineer. This we regard as one of the greatest deficiencies of our Board. South Carolina, above all states, needs competent supervision of sewage disposal and intelligent direction of drainage projects to prevent malaria and to reclaim parts of the State that are very fertile and yet are uninhabited or sparsely settled on account of malaria. What can be done in the way of prevention of malaria is illustrated by what has been done in reclaiming the site of Camp Jackson. This was a swamp and yet after the work was completed by Sanitary Unit No. 1 of the Red Cross, directed by Dr. Frieuch Simpson, of the U. S. Public Health Service, only one case of malaria developed among the thousands of soldiers at Camp Jackson. This brings us to speak of the work done by the U. S. Public Health Service in the Extra-Cantonment areas. These were set aside by resolution passed by the Board last year. The financing of the work done in these extra-cantonment areas was jointly furnished by the Red Cross and

the U. S. Public Health Service. Much money has been spent and much good has been accomplished.

As an object lesson of what can be done by a properly financed Board of Health, the report of the work done by Dr. Simpson in Columbia is appended to this report. The resolutions passed for the government of these cantonment areas are very comprehensive and much good has been accomplished. Among the objects achieved has been the pasteurization of milk. Pasteurized milk is regarded by sanitarians as the best solution for the prevention of milk borne diseases. Among these diseases may be mentioned, typhoid fever, diphtheria, scarlet fever and tuberculosis. At present in Greenville, Spartanburg and Columbia pasteurized milk is served in all restaurants and hotels patronized by soldiers. It is hoped that this pasteurization of milk will be continued by the health departments of cities when the Sanitary Units paid by the Red Cross and the U. S. Public Health Service leave.

Epidemic Diseases

The three diseases which have been most prevalent in this State in the past year in epidemic form have been measles, cerebro-spinal meningitis and influenza. Seventy-five deaths have been attributed to measles, 171 to cerebro-spinal meningitis and about 4,000 to influenza. Of the other communicable diseases there have been forty-six deaths from diphtheria, 497 from pellagra, seven from infantile paralysis, three from scarlet fever, 365 from typhoid fever and 224 from whooping cough.

This report compares very favorably with last year's report and we believe that there will be a gradual lowering of the death rate from these diseases.

For the first nine months of the year—from January 1st to September 30th

--there were 18,207 deaths and 32,459 births. These deaths do not include the month of November which shows the total death rate of 6,192 so that in November alone more than one-third of the total deaths for the first nine months of the year occurred.

Vital Statistics

The Bureau of Vital Statistics is functioning well and has been called upon this year many times for birth and death certificates, especially as the Government has required a birth certificate as the best proof of legitimacy before it would pay allotments made by soldiers.

The Red Cross Home Service has been very particular in its rendering of aid to the families of indigent soldiers to find out whether the children for whom support was claimed were registered. It has furnished the only available data as to the extent of any epidemics that have been in the State. It has shown us the necessity of a Bureau of Child Hygiene because the deaths among children under two years of age has been far above the average death rate in other states. We feel that something has to be done to improve the situation. Another point brought out by Vital Statistics has been the appalling number of deaths of mothers during parturition and pregnancy. From January 1st to September 30th, 1918, there were 262 mothers who died attended by doctors and thirty-five unattended by doctors. When we read between the lines we see what this means. A total number of 297 deaths out of 32,459 births shows a percentage of approximately one per cent. This is appalling for any maternity hospital that has a death rate of one woman out of every 1,000 births is considered to have an altogether too high death rate.

We consider that the women brought

into maternity homes are either of the poor or of those who have been in labor for some time and are brought there for relief. We can see that for South Carolina to have ten times as many women to die during parturition and pregnancy means that something is radically wrong with our system. We allow dirty, ignorant women to proclaim themselves capable of taking care of mothers at this time when they should have the most skillful care and attention.

There is no midwife law in South Carolina. No one, no matter how ignorant she may be is debarred from calling herself a midwife. They are neither licensed, nor inspected, nor do they know anything in regard to what is necessary to preserve life under these circumstances.

It is certain that of the 300 mothers who died, at least two-thirds of the children born at that time also died from simple neglect. For this reason we are going to urge the Legislature to establish a Bureau of Child Hygiene. The function of this Bureau will be:

1. Registration of births.
2. Prenatal care of children.
3. Medical inspection of school children.
4. The establishment of clinics for remedying the defects found in the medical inspection of school children.

A fuller account of this proposed Bureau will be found in other pages of this volume.

Laboratory

A full report of this work will be found elsewhere in this volume. Dr. F. A. Coward patriotically offered his services to the Government, and has been in France most of the past year. Dr. Jas. R. Cain and Dr. H. M. Smith have carried on the work. The Wassermann tests have grown in number, and will continue to increase as we

conduct the campaign against Venereal Diseases.

Typhoid bacterin has been sent out in large quantities—we having spent \$2,500.00 on it this year. Immunizing doses have been furnished many, many physicians.

Pasteur treatment for rabies is furnished free also, and miscellaneous examinations of blood, sputum, etc., are made.

This Department deserves more support than it has received from the General Assembly, for the Laboratory is to the physician what the Bureau of Vital Statistics is to the sanitarians, for it furnishes them with eyes so that they may not be blind to conditions which may exist in their patients.

Department of Rural Sanitation

This Department received from the Legislature an appropriation of \$14,500.00 for this year—the largest appropriation that has yet been given. The work has been done in Orangeburg, Darlington, Lexington and Greenwood Counties. An appropriation of \$14,500.00 was also made by the International Health Board, and the four counties mentioned appropriated \$11,000.00 making a total of \$40,000.00. This has been spent in endeavoring to arouse the sanitary conscience of the rural communities to the necessity of protecting their health, and with the hope that each County may establish an efficient Department of Public Health. The need for such a Department has been emphasized in the great epidemic through which we have just passed. Only two counties in the State, Greenville and Spartanburg have health officers. Dr. L. A. Riser, who has been in charge of this Department has entered the Medical Department of the Army, and Dr. Vance W. Brabham has efficiently taken his place as Director of Rural

Sanitation. A careful reading of Dr. Brabham's report found elsewhere in this report will be of interest to the General Assembly.

Executive Department

As this Department is under the State Health Officer, and as he is writing this report, he feels a delicacy in mentioning the different things done by this Department. Suffice to say that it is a busy office. From it is distributed diphtheria antitoxin, smallpox virus, typhoid bacterin, tetanus and meningitis serum. Reports of epidemics and contagious diseases are received, advice given and bulletins printed on different health topics are distributed upon request.

The State Health Officer has made many trips throughout the State. He has attended all of the important medical meetings held in various parts of the country. Concise reports of these trips are appended.

Food and Drugs

This important work, namely the carrying out of the Pure Food and Drug Law, devolves upon the Department of Agriculture, but the regulations governing the carrying out the law are formulated by the State Board of Health. We believe that co-operation between these Departments would effect much good in improving the situation in this State. Laws should be enacted to prevent the sale of alcohol as an intoxicant, disguised under the name of some patent medicine, or as Jamaica Ginger, bay rum or lemon extract. Much drunkenness and crime occurs in this State on account of the greed of some druggists in selling these intoxicants.

It is believed that this General Assembly will enact laws adequate to deal with this situation.

THE SOUTH CAROLINA TUBERCULOSIS SANATORIUM

By Ernest Cooper, M. D., Superintendent

To the Chairman and Members of the Executive Committee, South Carolina State Board of Health:

Gentlemen:

Since the last annual report of December 10, 1917, 147 patients have received treatment at the Sanatorium. There were seventy-nine men and sixty-six women. Eleven men and three women remained ten days or less, sixteen men and five women were present not more than thirty days, while twenty-seven men and thirty-four women received treatment sixty days or longer. There are now twenty-five men and twenty-four women at the Sanatorium.

The condition of the men on admission was as follows: Incipient one; moderately advanced thirty-eight; far advanced thirty-nine; non-tuberculous advanced thirty-nine; non-tuberculous one; on discharge, apparently arrested two; quiescent two; improved twenty; not improved twenty-six, and four died.

The condition of the women on admission was as follows: Incipient one; moderately advanced twenty-eight, far advanced thirty-seven; on discharge, arrested two; apparently arrested two; improved fourteen; not improved fourteen; and ten died.

The new buildings were occupied in April, increasing the capacity of the institution from thirty-two to fifty-six patients. The infirmary which accommodates twenty-four patients has been full since it was opened, and usually there are several on the waiting list.

The dining room will seat one hundred people, and it would seem wise to enlarge the institution, at least to that

capacity at an early date. We now have an ample supply of water from two deep wells which furnish about fifteen gallons each per minute. The Deleo lighting plant has been satisfactory. I would suggest that a duplicate be installed so as to have lights should there be a break down in one engine.

The septic tank has been somewhat objectionable on account of the proximity to the infirmary. As our fire risk is considerable, we should have a chemical engine mounted on wheels, as the hand extinguishers are suited only for small fires.

A temporary cow barn was built during the summer. It is hoped that a modern dairy barn will be provided soon. The institution has supplied its own milk. There are now twelve cows in the herd, four Holsteins having been added this year. The entire herd has been tuberculin tested. There were no positive reactions.

The hogs have been kept at practically no expense, being fed the kitchen refuse. One hundred and fifteen pigs have been sold, yielding \$683.00. There are now fifty pigs five weeks old, and twenty-two full grown hogs. These pigs will sell for \$6.00 each. We supplied all pork used last winter, and will do as well this winter.

On account of the scarcity of labor and the drought, the garden was practically a failure. If possible the entire property should be so fenced as to have several grazing fields for the cows. By so doing the land will be improved, and brought to a high state of cultivation, and then other than cover crops can be raised profitably.

A beginning has been made in the development of a training school for nurses. Four young ladies—former patients of this and other institutions, are now enrolled—thus practically demonstrating that one with tuberculosis may recover and earn a living.

Since my last report a total of \$13,466.15 has been collected. Of this amount \$12,386.50 was for board; \$683.00 for pigs, and the balance for miscellaneous articles. Supplies have cost \$10,483.70; there was refunded \$110.50; and \$3,278.43 delivered to Dr. Hayne. A contingent fund of \$1,000.00 was placed at my disposal. Cash on hand now totals \$593.52.

There is need for improvement of the grounds adjacent to the buildings, and the laying of cement walks from one building to another.*

I wish to acknowledge my appreciation of the support and co-operation of your Board, and of the State Health Officer. I take this opportunity of expressing my appreciation of the co-operation given by my assistant, Dr. Claytor, the nurses, employees, and patients of the Sanatorium, as our results could not have been secured otherwise.

*It is suggested that the Legislature be asked to provide four or more "trusty" convicts to do this work. I believe that special enactment will be necessary to secure this labor.

THE STATE BOARD OF HEALTH LABORATORY

By Dr. James R. Cain, Acting Director

To the Chairman and Members of the Executive Committee, South Carolina State Board of Health:

Gentlemen:

THE Laboratory of the State Board of Health as it is today is the work of Dr. F. A. Coward. Elected as Director of a Laboratory that existed only in name, he through the past several years has built up a laboratory that is known and patronized by the physicians of the State and has their confidence. We were unfortunate enough

to lose the services of Dr. Coward when he was called into the active service of the United States Army in April. Since which time, however, the policy and methods of the Laboratory have remained in all essentials as he established them, nor is it considered advisable that they should be changed under the present circumstances and limitations.

The Laboratory force at present, in addition to the Acting Director, consists of H. M. Smith, Bacteriologist; Miss Elizabeth Ayer, Laboratory Assistant; and Miss Margaret Davis, Stenographer. Dr. Smith conducts the Wassermann tests and prepares the Pasteur treatments, while Miss Ayer, a University graduate, was recently secured to assist in the work of the Laboratory generally.

A tabulated statement of the work of the Laboratory for the year is appended. From this it will be seen that there has been an increase of some fifty per cent in the number of Wassermann tests performed, while there has been a decrease of twelve per cent in the number of other examinations made. The Pasteur department, too, shows a decrease of twenty per cent.

The increase in the number of Wassermann tests is directly attributable to the campaign conducted by the public health agencies toward the suppression of venereal diseases. The decrease in the number of other examinations is due to the going into Military service of numerous physicians, among them many who were most regular patrons of the Laboratory. Within the past few months, too, the wide prevalence of influenza left physicians with little time for attention to other diseases. The number of Pasteur treatments is merely influenced by one of the yearly fluctuations, the history of the department being one of increase, coupled with these unexplained,

occasional, downward fluctuations.

RECOMMENDATIONS: The present Laboratory equipment is sufficient for our needs. However, if appropriations permit, I would recommend the furnishing by the Laboratory of containers for the submission of specimens. This would tend to more consistent results, while safeguarding from infection to a greater extent the workers in the Laboratory, and tending to greater convenience for all concerned.

There are at present on file numerous copies of scientific journals, which have been received by the Laboratory from year to year. These should be bound to preserve them from loss and to present their contents for more ready reference.

In conclusion permit me to call your attention to the following recommendations, made at the time of the April meeting of your Committee:

“Dr. Coward, in the course of his reports to your Committee from year

to year, has called attention to the increase of rabies in this State and has urged the passage of a dog license law. This law has not been enacted, although I believe the time has come when a Campaign for its enactment should be commenced. But even without such a law there is decided room for work toward the prevention, or at least lessening of rabies in South Carolina. The incubation period in animals, the prevalence of the disease, the fact of its being endemic in certain communities, the mode of its transmission all are facts which, if properly stressed and explained would tend toward its ultimate elimination.

I would, therefore request of your Committee permission for the Laboratory to undertake a campaign of education under the direction, and with the approval, of the State Health Officer.”

Respectfully submitted,
James R. Cain,
Acting Director.

Wassermann Test

BLOOD	
Very Strongly Positive (++++)	1,435
Strongly Positive (+++)	198
Positive (++)	125
Weakly Positive (+)	158
Doubtful (+)	238
Negative (-)	4,566
Anticomplementary (AC)	334
<hr/>	
7,054	
SPINAL FLUID	
Very Strongly Positive (++++)	4
Strongly Positive (+++)	1
Positive (++)	2
Weakly Positive (+)	0
Doubtful (+)	4
Negative (-)	13
<hr/>	
7,078	

Pasteur Department

5
1

Total number of patients receiving treatment	455
Number of these patients under treatment December 31, 1918.....	21

Distribution of treatments according to counties: Abbeville, 7; Aiken, 27; Anderson, 22; Bamberg, 11; Barnwell, 18; Beaufort, 11; Berkeley, 1; Calhoun, 3; Charleston, 7; Cherokee, 0; Chester, 1; Chesterfield, 13; Clarendon, 7; Colleton, 10; Darlington, 15; Dillon, 10; Dorehester, 12; Edgefield, 5; Fairfield, 0; Florence, 35; Georgetown, 5; Greenville, 21; Greenwood, 5; Hampton, 4; Horry, 1; Jasper, 1; Kershaw, 6; Lancaster, 1; Laurens, 4; Lee, 14; Lexington, 19; Marion, 0; Marlborough, 30; Newberry, 6; Oeonee, 9; Orangeburg, 27; Pickens, 0; Richland, 13; Saluda, 10; Spartanburg, 18; Sumter, 12; Union, 0; Williamsburg, 29; York, 3.

Where Treated

Treated at home	431
Treated at Laboratory	24

				455
Kind of specimen for examination	Positive	Negative	Doubtful	Total
Sputa for B. Tuberculosis	179	776		955
Hookworm ova	66	202		268
Rabies	167	100	20	287
Gonococcus	20	51		71
B. diphtheria	66	210		276
B. coli in water	108	96		204
Plasmodium malaria	9	343		352
T. B. in discharges other than sputa...		25		25
Blood cultures	1	1		2
B. influenza	1			1
Pneumococcus	5			5
Miscellaneous Pathogenic Organisms:				
Meningococcus	6	16		22
Miscellaneous Intestinal Parasites other than Hookworm:				
Amebae	3	5		8
Ascaris L.	1			1
Tenia Nana	2			2
Miscellaneous specimens:				
Culture from protate	1	1		2
Pleuritic fluid		1		1
Cyst fluid from Thyroid		1		1
Widal test:				
B. typhosus	914	1,632	127	2,673
B. paratyphoid	162	2,492	19	2,673
Total	1,711	5,952	166	7,829
Typhoid Vaccine:				
Number of ampuls sent out from Jan. 1st until Dec. 1st, 1918.....				34,608

INFLUENZA IN SOUTH CAROLINA 1918

By Charles V. Aiken, M. D., P. A., Surgeon Public Health Service

I HAVE the honor to submit the following report of measures undertaken for the control of Influenza in South Carolina during the epidemic occurring from September 21, 1918, to date.

It is believed that Influenza was epidemic in South Carolina as early as the middle of September, but its appearance was first reported on September 21 in a wire from Abbeville. On September 25 the three Abbeville cases were added to by a report of one hundred cases from Newberry.

That the disease should have made its first appearance in western South Carolina seems logical when one considers the direct railroad connection existing between that section and the eastern part of the United States where Influenza first manifested itself in epidemic form.

The "Piedmont" section of South Carolina, in which the disease first appeared, is more thickly populated than any other part of the State. This, in part, is occasioned by the presence of a large number of cotton mills employing thousands of operatives. The close personal contact necessitated by their work afforded excellent opportunity for the rapid spread of the infection.

The method and route of the extension of Influenza from this point is not clearly defined but its next reported appearance was from the north-central section of the State. This area is included in the manufacturing section and the same factors which favored the dissemination of infection in the western Piedmont obtain.

On October 4 the State Health Offi-

cer was invited to a conference of Health Officials in Atlanta, Ga., the purpose of which meeting was to formulate plans for preventing and limiting the spread of the disease which had proved so highly fatal in Massachusetts and other states in the East.

The need for emergency medical and nursing aid was anticipated and on October 5, 1918, the State Health Officer requested Surgeon General Blue, of the U. S. Public Health Service, to send five physicians and ten nurses to supplement the depleted professional resources of the State.

Having observed the extension of the epidemic toward the south-eastern section of the United States, the Surgeon General, on October 6, 1918, recommended that general quarantine measures be put into effect. This suggestion was immediately accepted, and on October 7th the State Health Officer directed local health officers and county sheriffs to close schools, churches and picture shows, and to prevent other public gatherings.

To assist in obtaining the data necessary to intelligently conduct the campaign of control, the Bureau of the U. S. Public Health Service authorized the State Health Officer to secure daily telegraphic reports of the prevalence of the disease from every town in the State, and to have them charged to the Federal Government.

On October 10 two physicians, members of the Volunteer Medical Aid Corps, reported to the State Health Officer for duty and were assigned to communities requiring medical assistance. This was a most satisfactory acknowledgement of the State Health Officer's call for help.

The request for nurses had been referred to the American Red Cross, and on October 13 a special representative of the Southern Division of

that organization arrived in Columbia from Atlanta, Ga. He had been directed to secure the services of competent nurses who might assist in organizing an extensive volunteer nursing staff. The fine work done by this representative, and the devoted service performed by the nurses secured through his efforts deserve special mention. The people of South Carolina will not soon forget the effective assistance given by the Southern Division, and various local Red Cross Chapters.

Anticipating the assignment of a large number of Public Health Service employees to South Carolina for duty in connection with the Influenza Control Measures, Surgeon General Blue on October 17 detailed a Commissioned Officer of that Corps to assume supervisory charge of personnel under direction of the State Health Officer. This action met with the full approval of the President and other Members of the South Carolina State Board of Health.

The combined effort of the Public Health Service and other organizations resulted in the assignment of a number of physicians and nurses and these were already doing much to fill the gaps created by illness and calls to military service.

Influenza was made a reportable disease at a special meeting of the Executive Committee of the State Board of Health and all physicians and local health authorities were urged to keep the Secretary informed of the prevalence of the infection. The response to this request was most satisfactory, and by October 21 daily reports were being received from nearly 200 towns and communities.

Calls for medical and nursing help were almost as numerous as these reports, for no section of the State was being spared. The "Emergency In-

fluenza Staff' sent out by this office worked heroically and they must be given credit for saving many lives. Perhaps less merit was found in the treatment and care of the individual than in the great benefit derived from the return of community confidence occasioned by the knowledge that an organized effort was being made to help. Local hysteria was prevalent, and, lacking definite information, local resources were overlooked. This undesirable state of affairs was rapidly overcome wherever physicians and nurses were sent.

Early in the epidemic the Bureau of the Public Health Service authorized the establishment of emergency hospitals for the treatment of pneumonia cases following influenza. The value of these institutions was demonstrated many times over. Not only were the sufferers afforded better treatment, but, by thus concentrating the cases a comparatively limited number of physicians and nurses were enabled to do the work for which many more would have been required had the cases been widely separated.

The infection continued to spread and to become more prevalent until the third week in October. Certain communities, first to feel the effect of the disease, showed signs of improvement, and hope was aroused that the plague would spend its force by the first of November. A careful recheck of the office records on October 27 showed that 86,415 cases had been reported from forty-five counties. Owing to the fact that many communities, both urban and rural, had been overwhelmed by the severity of the local epidemic, complete reporting of the disease had never been obtained, and could hardly be expected. Subsequent reports received from localities as they emerged from the worst effects of the least 10% of the entire population of

the State had suffered from Influenza.

For the first two weeks of the epidemic few cases of pneumonia were reported. At no time was an accurate account made, but from October 15 to October 30 a daily increase was observed in the number of cases of pneumonia and deaths from that complication.

A total of 3,600 deaths, directly attributable to Influenza complicated by pneumonia, were recorded in the Bureau of Vital Statistics during the month of October. As the average death rate for October is about 2,000, and a total of 6,100 deaths were recorded it is believed that not less than 4,000 lives were taken by pneumonia alone.

During the last week in October there was a distinct decrease in the number of new cases reported from many communities and requests were received daily for permission to reopen schools. The optimism expressed by the school authorities was not shared by the State Health Officer and the officer of the Public Health Service who had observed the rapid extension of the infection, but the Board being of the opinion that school children under careful supervision are often better protected in school than when at home, all requests were given consideration. A telegram was sent County Sheriffs and local Health Officers, advising them that general quarantine would be relaxed on Monday, November 4, in all localities in which Influenza had ceased to spread. All were given to understand, however, that a statement from a competent health authority, approving the relaxation of precautions, would be required before the ban might be lifted in a given locality.

Because of the general improvement in conditions the blanket quarantine order of October 7 was revoked on November 4, churches and schools being the first to take advantage of the

release. Eleven counties, however, voluntarily continued the complete enforcement of the preventive measures recommended by Surgeon General Blue, and with the full approval of all who could foresee the extreme danger of too early return to the ordinary routine of living.

It was feared that an immediate reaction would follow the enthusiastic resumption of personal intercourse but the general improvement continued. Not until two weeks later was its effects manifested. A daily increase in the number of new cases occurring was reported generally all over that section of the State which had first been invaded. Those counties last to become infected were latest to report a recrudescence.

From time to time since November 15 it has been necessary to reimpose quarantine on localities, and in certain instances whole counties have been closed. This action was taken only after consultation with authorities familiar with the local situation, and in every instance marked improvement was noted as soon as public gatherings were discontinued. Quarantine, as expressed by the closing of schools and churches, may or may not be effective in large cities, but in rural communities where the church and school are the centers of social activity the benefits are immediate, and so marked as to prove conclusively the wisdom of the measures suggested by the Surgeon General of the Public Health Service.

The thirty physicians employed by the U. S. Public Health Service, and the forty nurses furnished by the American Red Cross, were pillars of strength to many needy communities. Assisting them was a large body of unsung laborers, unselfish men and women who did all they could to lessen the suffering, and to supply the

needs of helpless families. The generous and capable assistance given by these volunteers made doubly valuable the service performed by the trained workers. Good "neighbors" are valuable assets when 10% of the population of a state is in bed.

To afford medical aid to the State of South Carolina the Public Health Service spent nearly \$15,000 in six weeks. The Southern Division of the American Red Cross employed and maintained in the field a force of forty nurses for a similar period. Local Red Cross Chapters provided nurses, medical supplies, clothing, food and hospital care to hundreds of cases.

At the request of the State Health Officer the State Council of Defense appropriated \$2,000 when financial aid was desperately needed. To date \$1,800 of this fund has been disbursed and has served not only to provide medical attention to a number of persons, but has covered the major portion of the administrative expenses of the campaign.

Influenza is still prevalent in South Carolina and will doubtless continue for many months. Unquestionably the present expression of the disease is less severe than when the epidemic first covered the State. Deaths occur from pneumonia following the disease but few cases develop this dreaded complication. The increased care exercised to prevent infected persons from convelescing too rapidly doubtless plays a large part in the lowered death rate.

The October-November Influenza Control Campaign was in no sense a triumph of scientific investigation. The value of prophylactic and curative sera was not tested nor were new methods of control produced. Certain facts stand out prominently, however, results are far more conclusive than arguments. Efficient medical and

nursing aid were give nto thousands of persons who otherwise might have suffered without any attention whatever. By the judicious use of quarantine authority the morbidity curve was flattened out and the average death rate for the entire epidemic to date will not exceed 0.5%.

Certain tables have been condensed and one list submitted showing the number of eases of Influenza and the number of deaths, both white and black, for each of forty-five counties, during the month of October. Supplementary reports indicate a total of between 150,000 and 170,000 cases of Influenza and less than 5,000 deaths.

List of Cases of Influenza, and of Deaths Caused by Pneumonia Following that Disease Reported to the State Health Officer During October, 1918

<i>Counties</i> 45	<i>Influenza</i> <i>Cases</i>	<i>Deaths</i> <i>White</i>	<i>Deaths</i> <i>Colored</i>
Abbeville	980	16	26
Aiken	1734	22	38
Anderson	3759	82	42
Bamberg	841	4	28
Barnwell	2132	3	23
Beaufort	599	8	18
Calhoun	1136	4	64
Berkely	155	3	35
Charleston	6605	156	209
Cherokee	154	26	14
Chester	881	2	22
Chesterfield	746	15	18
Clarendon	2132	15	123
Colleton	357	4	8
Darlington	1232	26	61
Dillon	5000	12	8
Dorchester	793	6	16
Edgefield	911	10	5
Fairfield	184	3	24
Florence	1457	44	98
Georgetown	1690	23	38
Greenville	4642	148	55
Greenwood	3679	42	65
Hampton	816	12	24

Horry	2609	28	47
Jasper	869	1	11
Kershaw	783	10	27
Lancaster	2428	59	49
Laurens	2093	38	47
Lee	813	12	44
Lexington	1384	37	44
McCormick	522	12	30
Marion	1734	4	66
Marlboro	1789	34	82
Newberry	3000	36	8
Oconee	1637	18	94
Orangeburg	3883	35	18
Pickens	748	144	192
Richland	8191	10	8
Saluda	246	63	42
Spartanburg	3552	26	116
Sumter	1939	9	8
Union	1465	21	121
Williamsburg	3284	68	64
York	2531	3	24
	86415	1395	2205
<hr/>			
Total Cases	86415		
Total deaths			3600

NOTE: The completeness and accuracy of the above list is not vouched for by this office and is merely a compilation of figures received in the Bureau of Vital Statistics during the month of October.

Additional case reports show the disease to have been nearly 100% more prevalent than actual reports indicate and ddeaths reported during November

will increase the total deaths to about 5,000.

Nations and states and even individuals have always pai da heavy tribute for unpreparedness. The forty-five counties in South Carolina followed the land established precedent when stricken with the epidemic of Influenza. More than 4,000 lives will have been wasted and untold suffering experienced in vain if the people of this State do not make immediate and everlasting use of the terrible lesson so pointedly expressed by the helpless condition into which they were thrown when Influenza struck a population, 90% of which was without adequate health organization. The necessity for efficient County Health Units, so pressingly urged by the State Health Officer, must now be apparent to every citizen of South Carolina. When a nation is stricken each State must look out for itself, and when a State is helpless in the grip of disease each county must take care of its own problem. It is impossible to estimate the saving of life and needless suffering had each of the forty-five counties in South Carolina been properly equipped to combat Influenza. It must not be forgotten that there are other disease conditions which menace the health of the people of this State and “tomorrow” is no time to get ready to meet an enemy, the appearance of which may not be definitely anticipated.

SOCIETY REPORTS

COLUMBIA

December 30, 1918.

I am enclosing results of the election of officers for the year 1919:

President, Dr. C. L. Kibler re-elected.

Vice President, Dr. F. M. Durham.

Secretary-Treasurer, Dr. Edythe Welbourne re-elected.

Delegates to State Association: Dr. N. B. Edgerton, Dr. J. H. Taylor, Dr. H. W. Riee, Dr. G. H. Bunch.

Board of Censors: Dr. Jane Bruce Guignard, Dr. J. H. Taylor, Dr. R. W. Gibbes.

Public Health and Legislation: Dr. S. E. Harmon, Dr. H. W. Riee, Dr. G. H. Bunch.

Committee on Program and Scientific Work: Dr. J. H. Taylor, Dr. R. W. Gibbes, Dr. W. R. Barron.

Committee on Entertainment and Refreshments: Dr. C. E. Owens, Dr. N. B. Edgerton, Dr. D. S. Black.

Edythe Welbourne,
Secretary.

GREENVILLE

At a meeting of the Greenville County Medical Society held December 16, 1918, the following were elected officers for the year 1919:

Dr. Chas. H. Fair, President.

Dr. J. W. Curry, Vice President.

Dr. Jno. B. Hill, Secretary.

Dr. E. W. Carpenter, Treasurer.

Dr. W. C. Black, Delegate to S. C. Medical Association for three year term.

At this meeting a lively discussion was entered into by the members as to the best way to keep up an enthusiastic interest in the medical society and its work. All the members seemed interested in every phase of the work of the County Society and the year 1919 promises the Greenville County Medical Society more enthusiasm, better work and better papers from the members.

At a regular meeting of this Society held at 8:00 P. M., January 6, 1919, Dr. R. C. Bruce read an able paper on Influenza and Dr. W. C. Black read a splendid paper on the treatment (Surgically) of Empyema following Influenza and Pneumonia. Both of these papers were discussed by nearly every member present.

Drs. E. C. Stroud, D. L. Bryson and W. L. Mauldin were elected new members at this meeting.

Interesting clinical cases were reported by Dr. L. O. Mauldin, Dr. S. C. Glover, Dr. L. L. Richardson, Dr. E. W. Carpenter, all of which were discussed by members of the Society.

A B S T R A C T S

THE STANDARDIZATION OF HOSPITALS FOR THE INSANE

Advantages of State Over Private and County Institutions—Importance of Fire Protection—Toilet Arrangements, Bathing, Heating, and Lighting—Governmental and Administrative Conditions

By William C. Sandy, M. D., Assistant Superintendent Connecticut Hospital for the Insane, Middletown, Connecticut

There is probably no special class of hospitals in greater need of standardization than that devoted to the care and treatment of the insane. Vast sums are annually appropriated for the maintenance of the public institutions for the insane. From the standpoint of the taxpayer, every effort must be made to establish methods of economical care. It is of vital importance to the public welfare, however, that such equipment and facilities be furnished as will promote every possible chance for restoration, and that provision be made for prophylactic measures. For it should be generally recognized that the likelihood of recovery may be increased, and recovery itself hastened, by the application of proper methods of treatment, and that in prophylaxis lies the principal hope for the future in combating the ever-increasing problem of the insane.

In general, there are three great classes of institutions for mental diseases—the private, the county, and the state. The private hospitals, usually called sanatoriums, occupy a peculiar and special position, often providing

the exclusive and individual care which appeals to those who can afford the high rates commonly demanded. There are many well-equipped and admirably conducted private hospitals where the most modern forms of treatment and the best results may be obtained. On the other hand, unfortunately, there are privately conducted institutions, hospitals in name only, with exorbitant rates and bare custodial care, the standard being scarcely above that of a first-class almshouse.

The county hospitals, aside from the few large institutions which resemble in management the state hospitals, are generally unsatisfactory. This is, for the most part, due to a close affiliation with almshouses and to political administration. The limitations of this paper will not admit an adequate discussion of these institutions with their meager equipment, lack of treatment, and untrained medical staffs, all of which should be regarded as relics of the past.

The state hospitals, usually free from serious political entanglements, with the resources of the state behind them, are provided with larger staffs of trained physicians, better equipment, and more scientific methods. It is the purpose of this paper to consider the state hospitals and to outline briefly what may be regarded as desirable and possibly ideal, according to the present knowledge in respect to equipment, methods, and the like.

In discussing the question of standardization of state hospitals for the insane, one should bear in mind the objects of such hospitals. While in some sections of the country it is still customary to use the term "asylum" and

many of the institutions are little better than the old custodial type, the best modern hospitals for the insane have far higher ideals and a broader scope. It should be the aim of the hospital to restore, as soon as possible, the recoverable; to prevent deterioration and to endeavor to reeducate the so-called chronic; to treat successfully the physically ill; to guard against injury or accident, such as suicide; to care for and make comfortable the excited, the feeble, and the aged; to hold those dangerous to themselves or to the public; to make such full examinations and keep such complete records that the work of the hospital will have present and future scientific value; and, finally, through outside agencies, to be an active force for mental hygiene. It is needless to say that all of this is to be done in as efficient and economical a way as possible.

Very little will be said as to the proper size of institutions. This is purely a matter of theory, the actual size of hospitals being largely determined by the exigencies of the situation. Economy and the increasing number of patients make necessary, quite generally, large institutions. While it is undoubtedly true that the average executive will be more successful with hospitals of two thousand patients or less, institutions of over five thousand will be found to be efficiently operated, depending upon the capability of the administrator and his assistants.

In selecting the site for a hospital, preference should be given to a location somewhat removed from the large centers of population, in order that sufficient ground for exercise, with desirable privacy, may be obtained for the patients, and also ground for a farm and garden large enough to supply the necessary products for main-

tenance. Some consideration also should be given to the natural beauties and the hygienic qualities of the site, and it is, of course, essential that it be well drained and supplied with an abundance of pure water. While avoiding large cities, it is desirable to have the hospital accessible to a small town or city in order to insure the necessary diversion for employees, the obtaining of whom, at the present time, is an increasingly difficult proposition. The hospital should be connected with both steam and electric railways on account of freight facilities and the convenience of visitors and employees.

In the early days of state hospital construction, the architectural tendencies were towards massive single buildings of monastery or prison-like appearance, several stories in height and with rather numerous but needless ornate features, especially in the administration portions. While attractive appearance should not be disregarded, the substantial and fireproof qualities are far more essential. The present tendency is more towards detached groups of buildings. The so-called cottage plan is probably the idea, but is not practicable except on a large scale, that is, single buildings accommodating several hundred patients. Farm colonies, utilizing more cheaply constructed and temporary buildings, have demonstrated their usefulness for the chronic, quiet workers. In any case, buildings of more than two stories are seldom, if ever, desirable.

Too much attention cannot be paid to fire protection. The above-mentioned old type of single, large building, often a veritable firetrap, should be remodeled so as to be divided up into several units separated by fire walls and automatic fire doors. Outside covered fire escapes of approved type

and inside fireproof stairways should provide sufficient exits from every floor. These precautions are indispensable, as are also outside hydrants, standpipes, and hose on every floor connected with a water system of sufficient amount and pressure supplemented by a fire pump for emergency added pressure. All exit doors should open outwards.

The interior plans of the buildings, an adequate discussion of which would necessitate a volume, will be covered only in a general way. An excellent type of ward is one provided with a day room connected with a fireproof porch, a large dormitory for sleeping purposes, and a water section with sufficient toilet and bathing facilities. Necessary adjuncts are adequate clothes rooms, lockers, and the like. The dormitory for sleeping purposes, simplifying the night watch service, is applicable in the case of most varieties of mental disease, but a few single rooms are often desirable for certain violent, dangerous, or paranoid individuals.

There should be a sufficient number of wards or units to facilitate proper classification of patients based largely upon their demeanor and physical condition. New patients and those who may be convalescent, feeble, or of the quiet and tranquil type, should not be subjected to the annoyance and undesirable association with the violent, destructive, noisy, and untidy. An idea as to the requirements may be obtained from the following estimated percentage of the different classes. The acute or reception service may be represented by five per cent; the hospital or physically ill, two per cent; the chronic, quiet, and clean, twenty-eight per cent; the disturbed and violent, sixteen per cent; the feeble, aged, and infirm, twenty per cent; working, seventeen per cent; tuberculous, five

per cent; epileptic, five per cent; convalescent, two per cent. A desirable feature, if possible, is a separate building for the acute, reception, or as it is sometimes called, psychopathic department, especially well equipped for treatment, including an operating room. The tuberculous also are preferably cared for in separate and specially designed buildings.

In the matter of toilet arrangements, one seat to ten, or at least fifteen patients, with twice the number of wash basins may be considered a minimum requirement. The hoppers should be of the type which flush automatically when used. All hot-water faucets should be provided with safety devices to prevent patients from scalding themselves. Probably the simplest and safest way is to have the hot water turned off and on by means of a key with which the nurses and attendants only are provided; although theoretically the plan sometimes adopted of having a thermostatic attachment to the hot-water system is good.

The question of proper bathing facilities is one only too frequently neglected. No longer should bathtubs be deemed satisfactory equipment. It is a regrettable but actual fact that, where tubs are used as the sole method of bathing, many patients may be bathed by careless or ignorant attendants without changing the water. The only safe and sanitary method is by showers, each patient then being assured a clean bath, and a large number being easily bathed in a short time. TubS are required for special cases, such as some of the infirm, but shower baths are practicable for the majority of patients, both men and women.

Heating by direct radiation is probably, at the present time, the most satisfactory method. All radiators and hot pipes should be covered or placed

out of reach of patients who otherwise might easily be burned. The heating system should be combined with some method of automatic forced ventilation.

Lighting should be by electricity with properly protecting wiring, the only special consideration being that the turning on and off of the lights should be under the control of the nurses and attendants, by means of some key device.

It will suffice merely to mention certain other indispensable departments and facilities which for the most part do not acquire any new characteristics by reason of the special nature of the institution. Every hospital should have a proper method of sewage disposal. Necessary departments are the kitchen, bakery, dairy, store, laundry, the shop, e. g. carpenter, painting and mechanical, the cold storage and ice plant, the central lighting, heat, and power plant.

Some thought should be given to the proper housing of resident officers and employees. Comfortable quarters should be furnished, the hospital service being for many a lifetime career. There should be an employees' home with provisions for single and married attendants and nurses.

While the physical conditions of hospitals for the insane present many peculiar problems, such as have been briefly outlined, the governmental and administrative conditions are even more special in type and importance. Good work may very likely be accomplished by capable men even though handicapped by poor equipment, but surely proper methods of government and administration are indispensable.

Most state hospitals are under the general supervision of an unpaid board of managers or trustees appointed by the governor. That this board should be nonpartisan, free from petty politi-

cal entanglements, fairly secure in office, and not subject to the liability of sudden removal in the event of change of administration, should be self-evident. This may be accomplished by the provision that the board shall be continuous, the term of office of only a part expiring each year. Among the various duties of the board should be the close inspection of the finances of the hospital—this final control of the expenditures, if conscientiously carried out, assuring the safe-guarding of the public's interests.

The selection and appointment of the resident superintendent should be left largely in the hands of the board of trustees, who alone should have the power of removal, giving the executive officer the security in office essential for effective work. The primary aim of the hospital being medical, there can be no question that the chief executive officer should be a physician, one who has gained his experience in psychiatry by actual residence in hospitals for the insane, and who has demonstrated the necessary executive ability. Many of the difficulties preventing successful administration are due to frequent changes and the inexperience of political appointees. Divided and uncertain authority will merely serve to hinder the progress which is otherwise to be expected from the activities of a capable executive.

The assistant officers and heads of departments should be appointed by the board of trustees upon the recommendation of the superintendent and should be entirely under his direction.

Generally speaking, a desirable proportion of physicians to patients is about one to two hundred. The different services require a varying number, the acute or reception, for instance, require more than the chronic. In the larger hospitals there should be an assistant superintendent and a clinical

director, the duties of the former being to relieve the superintendent of certain routine matters, such as the help problem, those of the latter being to supervise and correlate the medical work. In the smaller hospitals these two positions may very easily be combined.

There should be enough resident experienced assistant physicians to take charge of the various services. A requisite number of resident junior assistants and interns are required to assure the proper attention to routine details. The interns may be only temporary officers serving largely for the experience. The other members of the staff, however, should, as far as possible, be registered physicians interested in the study of psychiatry as a career. Every hospital for the insane should have at least one woman physician on the staff, chief among whose duties should be to make those special examinations and treatments so essential to the comfort and welfare of the women patients.

A successful administration of the hospital will depend largely upon the qualifications of the heads of the departments. Executive ability and expertness in the special field coupled with loyalty and co-operation are essentials to be looked for. A business manager, purchasing agent, or steward is required, one who is able to install modern business methods, and who is qualified as a judge and buyer of supplies. Other important positions are storekeeper, farmer, engineer, head carpenter, laundryman, and chef, all of which come under the immediate supervision of the business manager. There should be a matron whose duty is the general supervision of the housekeeping and the help therein engaged. More detailed discussion of these and similar positions is not necessary, as there are no very unusual conditions

liable to be met with in these departments, owing to the special nature of the hospital.

The importance of having a sufficient number of reliable nurses and attendants is self-evident. It is in this department, however, that one of the greatest difficulties is encountered, it being almost impossible to secure enough help (in numbers) without much regard to the quality. This has become especially true since the beginning of the war because of the high wages offered by munition and other industries. Many hospitals have been brought to the necessity of hiring practically all applicants without regard to grade and even then being twenty-five per cent or more short-handed. In view of the scarcity of applicants, it is almost useless to state that there should be at least one nurse or attendant to ten patients, a proportion seldom possible at this time. Especially on the reception and infirmary wards for men, women nurses should be employed. Where it is possible to secure enough competent women nurses, they should be placed in charge of other male wards, with resultant improvement in the quality of nursing and housekeeping, and less liability of ill-treatment of patients.

An adequate force of attendants and nurses should be assigned to the night service, the minimum requirements being, generally speaking, one nurse or attendant to forty patients. In any case, there should be a sufficient number of employees to permit the doors of a majority of the patients' rooms to be unlocked at night. This expedient is exceedingly important from the standpoint of fire protection alone, as is also the holding of regular fire drills of both employees and patients, the former being taught the use of fire-fighting apparatus, including hose and extinguishers, which should be plenti-

fully supplied throughout the hospital, and the quickest way of getting the patients out of the buildings. In connection with this, and for additional fire protection, it is well to have two fire companies composed of outside employees and provided with hose-carts, chemical apparatus, ladders, life-nets, and so forth, and which hold regular, practical drills. The existence of two companies, each with a chief, will result in a wholesome rivalry and increased efficiency. Besides the inside night service, there should be enough outside watchmen to insure the required order and safeguarding of the buildings and grounds. As a check upon the night service, a modern watchmen's clock system should be installed, or both the inside and outside night employees may be correlated by means of a system of ringing in to a central office, such as is found in a first-class police department. The latter plan combines the desirable features of both a watchmen's clock and a standard fire-alarm system at probably no greater expense.

In immediate charge of the attendants and nurses of each service should be a day and a night supervisor who are the physicians' representatives in respect to discipline, order, and direction.

The training school for nurses should be an important adjunct to every hospital for the insane. While most of those in immediate charge of the patients will be of the attendant class, perhaps with considerable practical but with little theoretical knowledge as to proper methods, the presence of a good training school will mean that there will be a certain number of the more intelligent men and women undergoing instruction which cannot fail to elevate the standards of care and treatment. The quality of the instruction, of at least two but preferably

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Water	- - - -	7.7%
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These are facts which women should know in these high-cost days. Ten people can breakfast on Quaker Oats at the cost of feeding one on meat.

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Chicago

(3008)

three years' duration, should be such that with an additional post-graduate course in a general hospital, the graduate of the training school may obtain state registration. At the head of the training school should be a competent superintendent of nurses, a graduate nurse of recognized standing. The lectures should be given by the members of the resident medical staff. The ordinary attendants should also receive instruction in the more practical and necessary branches in order that they may have a proper conception of their duties.

While perhaps of less relative importance than in the case of general hospitals, a well-stocked pharmacy is required, presided over by a registered pharmacist. Much of the latter's time will be taken up with prescription compounding, as few drugs will be kept on the wards.

The efficiency of the medical work will depend to a considerable degree upon the routine method of examination and treatment prescribed for the medical staff. Upon admission every patient should be placed in bed in an observation ward for a week or ten days, during which time a thorough mental and physical examination should be made. In the physical examination nothing should be neglected. The ordinary laboratory procedures, such as urinalysis, should be supplemented by such special examinations as that of blood, sputum, gastric contents, feces, and so forth, as may be indicated. A Wassermann blood test should be done in each case with spinal fluid examination where indicated. A detailed mental examination, modeled after that recommended some years ago by Adolf Meyer, should be made. The results of the mental and physical examination are then to be typewritten in accordance with a regulation form; the latter being necessary in order

that every item of importance in the patient's condition may be covered, for his own welfare and so that the statistical and other records may be made of the greatest possible future value. This, of course, presupposes that adequate clerical and stenographic assistance shall be available.

At staff meetings held daily, or frequently enough for the accomplishment of the work, and presided over by a clinical director or other competent officer, each case history is to be read and the patient presented in person in order that the benefit of a full consultation as to diagnosis, treatment, and other matters of importance may be assured all patients admitted.

Space will not allow a detailed discussion of certain other necessary facilities. To secure thorough treatment for all, there should be proper dietetic arrangements, surgical equipment for any operation, a consulting staff of surgeons, electrical apparatus for diagnosis and treatment, a resident dentist with the required equipment, and some provision for ophthalmological and other special examinations when required.

No hospital for the insane is adequately prepared without provisions for the application of hydrotherapy. By hydrotherapy is meant treatment by means of the continuous bath, the various forms of wet-pack and special bath, such as the needle, rain, shower, the different douches and the like. The lack of hydrotherapeutic facilities (associated also with an insufficient number of attendants, too few wards for the proper separation of the disturbed, the faulty methods of treatment) account to a great degree for the practice in some hospitals of restraint and seclusion, which no longer are countenanced in the best modern hospitals except in extreme cases.

Occupation, when properly applied

as a therapeutic agent in the treatment of the insane, not only retards mental deterioration, in many cases, but also frequently hastens recovery and serves to prepare the patient for a return to his normal environment. One or more full-time instructors are required, and the various forms of diversional occupation, such as raffia and reed basketry, rug, brush and broom-making, knitting, crocheting, tatting, embroidery, and the like, cement-work, chair caning, and so forth, should be made available. Of great value, in the same way, and of considerable economic importance are the opportunities for farm and garden work available to the patients. Besides the foregoing, much of the clothing, the shoes, the mattresses, and some of the furniture may

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"It commends itself as an excellent casein modifier and at the same time effectually disposes of the bacteriologic problem"

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There is 25 per cent bran, and the bran is in flake form to be extra-efficient. Yet it is inconspicuous.

It was made to please doctors who wanted a bran food which people will continue. And thousands of doctors advise it.

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A breakfast dainty whose flavory flakes hide 25 per cent of bran.

Also Pettijohn's Flour—75 per cent fine Government Standard flour, 25 per cent bran. Use like Graham flour in any recipe.

(3004)

be made by patients under supervision.

There should be a school with a teacher competent to apply graded re-educational methods helpful in certain classes of patients.

Recreation also is effective as a means of arousing the interest and of combating the tendency to dementia. No community is doing justice to the insane in its care without providing forms of amusement in the shape of dances, moving pictures, baseball, and other kinds of games and entertainments. There should be an athletic field and also a fireproof assembly hall large enough to accommodate a fair proportion of the patient population. Religious services should be held regularly, presided over by clergymen of the various denominations.

(Continued in February Issue)

ANNOUNCEMENT

Messrs. Hynson, Westcott & Dunning
BALTIMORE

Will use space in this journal regularly during 1919 to present to its readers the true characteristics of their **STANDARDIZED THERAPEUTIC AGENTS**, all of which have been accepted by the Council on Pharmacy and Chemistry, A. M. A., and to describe their **NEW DIAGNOSTIC TESTS AND APPLIANCES** authorized by prominent diagnosticians. Attention to their advertisements is respectfully requested.

AN ILLUSTRATED CATALOG
will be sent upon the request of any
member of the State Society

EMORY UNIVERSITY

SCHOOL OF MEDICINE

(Atlanta Medical College)

Sixty-fourth annual session begins September 23rd, 1918.

ADMISSION: Completion of four-year course at an accredited high school, which requires not less than 14 units for graduation, and in addition, two years of college credits in Physics, Biology, Inorganic Chemistry, and German or French. The pre-medical course may be taken in the College of Liberal Arts at Oxford, Ga. Admission to the pre-medical course may be obtained by presenting credentials of 14 units of high school work.

COMBINATION: A student may enter the regular Freshman class on 14 units and attend the College of Liberal Arts for two years, after which he will be admitted to the Freshman Medical Class, and upon the completion of his Sophomore year in the Medical College, can obtain the degree of Bachelor of Science, gaining his M. D. degree after another two years at the Medical College.

INSTRUCTION: Thorough laboratory training and systematic clinical teaching are special features of this institution. The faculty is composed of 106 professors and instructors, twelve of whom are full-time salaried men.

EQUIPMENT: Five large new modern buildings devoted exclusively to the teaching of medicine, well equipped laboratories, and reference library.

HOSPITAL FACILITIES: The Grady (municipal) Hospital of 250 beds is in charge of the members of the medical faculty during the entire college session, and the Senior Students (in small sections) are given daily clinical and bedside instruction there. In the near future, work will begin on the new Wesley Memorial Hospital (of 200 beds) at a cost of not less than \$200,000.00, which will be erected on or near the site of the present Medical College. The wards of this hospital, when completed, will be under the complete control of the faculty for teaching purposes. The J. J. Gray Clinic, which has just been completed at a cost of \$75,000.00 affords ample accommodations for this large clinic, and excellent facilities for clinical instruction.

RATING: This college is rated as a Class A Medical School by the Council on Medical Education of the American Medical Association and is a member of the Association of American Medical Colleges.

Catalog giving full information, also entrance blanks will be sent by applying to Wm. S. Elkin, A. B. M. D., Dean.



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We use a whole pineapple to flavor one hospital-size package.



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Gelatine foods have attained new recognition among medical men since the advent of Jiffy-Jell.

It employs a rare-grade gelatine. All its fruit favors are made from fruit. They are highly condensed and abundant. And they come in sealed glass vials—a bottle in each package—so the fresh-fruit flavor keeps.

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The U. S. Food Administration placed gelatine preparations for hospital use in the essential class for sugar allotment, because of their importance in the dietary of the sick and convalescent.

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Jiffy-Jell forms an easily digested food. Its wealth of fruit flavor makes it appetizing. It comes ready-sweetened, with the flavor in a vial. One simply adds boiling water. Other desirable foods can be made inviting by mixing them in the Jiffy-Jell before it fully cools.

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Furunculosis

FIFTEEN cases of boils and carbuncles were cured by yeast treatment, out of a total of sixteen cases of obstinate character! A case of style promptly yielded—the cure being very rapid.

These tests formed part of an investigation of compressed yeast as a therapeutic agent, made at the Jefferson Medical College, the Philadelphia General Hospital, and the New York Roosevelt Hospital, and reported by Philip B. Hawk, Ph. D. (Journal A. M. A. Vol. LXIX, NO.15).

"In furunculosis," the report states, "yeast is a remarkably efficacious remedy. Its curative action in these cases is no doubt aided by the leukocytosis which is developed."

FLEISCHMANN'S COMPRESSED YEAST, which is put up and sold in the familiar tinfoil package at grocery stores, and used by the housewife in making bread, was used. It is a scientifically cultured yeast, being of the species *Saccharomyces Cerevisiae*, and is of uniform strength.

Three cakes daily, between meals, was the usual dosage administered, in a suspension of water, fruit juices or milk.

This yeast may be secured fresh daily in most grocery stores. Or, write the Fleischmann Company in the nearest large city, and it will be mailed direct on days wanted.

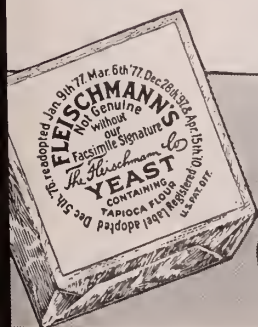
A reprint of Dr. Hawk's report, with added matter on the production of the yeast, has been distributed to physicians. If not in your files, a copy may be had upon request.

The Fleischmann Company, New York

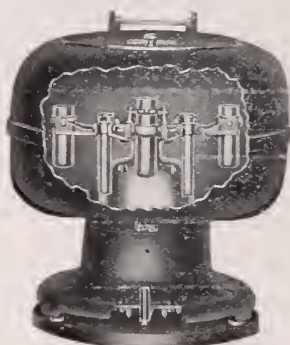
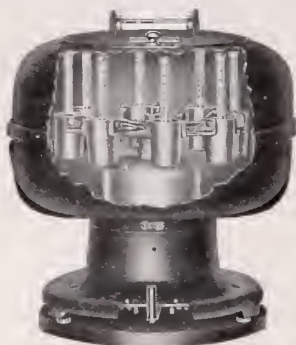
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J. LaBRUCE WARD, M. D., Columbia, S. C.

EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

TITLES OF PAPERS FOR FLORENCE MEETING

The Secretary has sent out a circular letter requesting titles of papers to be read at the Florence meeting be forwarded at once in order that the provisional program may be published in the March Journal.

KEEP THE MEMBER AT THE FRONT IN GOOD STANDING

The House of Delegates at its last meeting strongly urged that every County Society pay the dues of the members in the Service until they re-

turn home. It is gratifying that this was done in 1918 with very few exceptions. This is the only plan by which the State Medical Association can be kept going without increasing the dues.

REVISION OF MAILING LIST NECESSARY

The mailing list of the Journal was necessarily greatly impaired by war conditions. We appeal to all our members to assist us in revising it so that every member entitled to receive the Journal shall do so.

PAY DUES NOW!

1919 dues should be paid very promptly this year inasmuch as the profession generally has made good collections. We urge that this matter be not delayed until near the April meeting as is sometimes the case.

THE FLORENCE MEETING

Preparations for the Florenece Meeting are well under way now and the prospects are bright for a most interesting and profitable occasion. The session will occupy only two days this year insted of three and a great effort will be put forth to make every minute of the time enjoyable. Get ready Doector! Let it be a great Victory Meeting.

ORIGINAL ARTICLES

REPORT ON EPIDEMIC AND CONTAGIOUS DISEASES OCCURRING IN SOUTH CAROLINA DURING 1918

By James A. Hayne.

State Health Officer, Columbia, S. C.

Smallpox

NINETEEN eighteen did not show marked increase in the number of cases of this disease occurring in South Carolina, but in September and October of this year there was quite a severe epidemic in Laurens County, there being reported to this office 69 cases. The total number of cases of small pox reported was 180 this being less than the number of cases reported in 1917.

We have distributed vaccine virus as follows: 11,890 points at $4\frac{1}{4}$ cents per point and 15, 710 points at 8 cents per point. The faet that this was the lowest bid that we could get on vaccine virus made the expense of distributing same larger for this year than for the previous years. The payment made for smallpox vaccine virus for the first quarter was \$340.00, for

the second quarter, \$105.40, for the third quarter, \$908.80, and for the fourth quarter \$720.00.

These figures show that there are still a large number of people who have not yet been vaccinated, and that vaccination of school children is being more generally earried out.

The following doctors were appointed as special agents for the State Board of Health, under Section 2 of Act 434, approved the 22nd day of February, 1909: Dr. B. H. Baggott, Columbia, S. C., M. J. Walker, York, S. C., and T.P. Glenn, Greenville, S.C.

Scarlet Fever

This disease still continues in a mild form. Very few deaths have been reported as occurring from Scarlet Fever but we know that many deaths are due to other diseases produced by Scarlet Fever.

We repeat that the following measures should be carried out in the face of an epidemic:

1. Daily examination of exposed children and of possibly exposed persons for a week after last exposure.

2. Schools should not be closed

Florence	5	1					2	15	
Georgetown	1		2						
Greenville				1		2	5	11	16
Greenwood	2	1		2	2	3		2	
Hampton				1		1			
Horry	2			1				6	
Jasper									
Kershaw					6				
Lancaster			1			3	2		
Laurens				1				2	1
Lee	1	2				2			
Lexington	1		2	12		1		1	5
Marion	3	1				3	2	8	3
Marlboro	3			7	6	2		2	1
Newberry	1					1		6	
Oconee	7		3				4	24	9
Orangeburg	5	5	3	1	2	3		8	1
Pickens	4		3		1			6	
Richland	15	3	16	8	3	2		8	3
Saluda	1		2	1		2		9	
Spartanburg	7	4	9	9	6	1	6	10	29
Sumter	13		7	3		1	1	2	2
Union	12	5	2	4		2		11	
Williamsburg				1	5		1	3	1
York	1				3	3		21	1
Total	99	45	68	93	51	8	50	34	220
								79	

The amount of diphtheria antitoxin consumed as compared with 1917 is as follows:

	1000	3000	5000	10,000	1918				
1917	units	units	units	units					
January	58	33	95	38	January	55	37	106	51
February	25	11	81	25	February	23	8	54	50
March	33	20	97	29	March	35	20	76	48
April	45	18	81	29	April	34	31	102	102
May	23	22	87	26	May	23	11	50	31
June	48	30	133	29	June	35	52	70	66
July	38	30	46	15	July	37	7	49	37
August	146	79	210	64	August	99	25	140	85
September	181	99	226	99	September	134	41	217	170
October	193	96	312	130	October	81	22	110	42
November	194	114	252	169	November	82	31	130	108
December	103	40	116	100	December				
	1087	583	1736	725					

The expenditures for diphtheria antitoxin as compared with 1917 is as follows:

1917	
January	\$369.45
February	258.90
March	316.95
April	289.45
May	286.33
June	404.60
July	148.30
August	601.15
September	735.35
October	951.75
November	1017.70
December	498.05
<hr/>	
\$5,878.00	

1918	
January	\$340.90.
February	221.65
March	265.25
April	449.35
May	171.00
June	331.65
July	279.85
August	725.70
September	1260.95
October	482.55
November	789.10

The contract with E. R. Squibbs & Sons Company, of New York, was terminated on June 30th as they did not make as low a bid as the year before and as low as the bid made by National Vaccine and Antitoxin Institute secured a more satisfactory distribution of the antitoxin.

Typhoid Fever

This disease is said to be the index of the civilization of a community. This is well said because of the known cause of the disease. Typhoid Fever cannot be contracted except from swallowing the discharges from some

other case of Typhoid Fever and it is inconceivable that any civilized people could be so careless or so uncleanly as to be willing to do this. We believe that the education which we have carried on in this State in regard to the causation of Typhoid Fever is bearing fruit. However there were 365 deaths from Typhoid Fever for the first nine months of this year. Allowing 10 cases to each death, we have a total of 3,650 cases as compared with 3,960 last year. To show how neglectful the physicians are of their obvious duty of reporting communicable diseases, we have only 741 cases of this disease reported. There is perhaps some excuse for not reporting diseases that last only a short time but certainly no physician can plead that during the month or six weeks that a person is ill with Typhoid Fever that he did not have time to make a report of same.

There are two methods of ridding the State of Typhoid Fever, first, by inoculation with typhoid bacterin of all citizens of the State, and second, by sanitation of homes. We are trying both methods and with some success in the counties that are alive to the dangers of soil pollution. These counties this year are Orangeburg, Darlington, Lexington and Greenwood. The severe epidemic of Influenza has interfered greatly with the work in Lexington County as we could not put on a campaign there until about the first of May. However, in other counties we have been very successful.

The State Board of Health furnishes free of charge Typhoid Bacterin and has sent out about 28,000 ampules—in other words, inoculated over 9,000 people.

Upon the occurrence of an epidemic in a community, we send out the fol-

lowing rules for preventing Typhoid Fever:

... . . For the Individual

1. Keep away from all known or suspected cases of typhoid.

2. Wash hands thoroughly before meals. Do not use "roller towels."

3. Use drinking water only from sources known to be pure, or, if this is not possible, use water that has been purified by municipal filtration or by hypochlorite treatment or by boiling in the household.

4. Avoid bathing in polluted water.

5. Use pasteurized or boiled, instead of raw milk.

6. Select and clean vegetables or berries, that are to be eaten raw, with greatest care.

7. Avoid eating "fat" raw oysters, and, in general, oysters and other shell-fish whose origin is not known.

8. Be vaccinated against typhoid in all cases in which any special exposure is known or feared.

For the Community

1. Insist on the hearty co-operation of all persons with an efficient health officer.

2. Require notification and a reasonable degree of isolation of every known or suspected typhoid case.

3. Exercise strict control over the disinfection of known typhoid excreta.

4. Insist on pure or purified water supplies.

5. Require pasteurization of milk supplies.

6. Regard all human excreta as possibly dangerous, and control their disposition in such a way to prevent contamination of food and drink.

Tuberculosis

The educational campaign against Tuberculosis is still being conducted and this year we are endeavoring, by a pamphlet entitled, "What you Should Know About Tuberculosis," to reach the school children. A copy of this pamphlet has been sent to each teacher in South Carolina with a request to teach the same in the school to the higher grades. These pamphlets will be furnished in whatever number may be desired. The Field Secretary, Mrs. Annie I. Rembert, is carrying on this work under an appropriation made for the distribution of literature for better education about the facts of Tuberculosis.

The Sanatorium is full and a report of its activities may be found elsewhere in the volume.

There were, for the first nine months of the year, 1,326 deaths from Tuberculosis, which is less than last year, showing a gradual reduction in the death rate in this State.

We append a tabulated statement of deaths from Tuberculosis, all forms, in the following counties for ten months to November 1, 1918.

AN OLD TREATMENT OF GRIPPE

By W. Tertsh Lander, M. D., Williamston,
S. C.

DURING the Grippe Epidemic of 1889 and 90 a series of urinalyses led me to suggest to some of my medical friends that it would be advisable to counteract the acidity present. The result was so satisfactory in the improved death record and duration of the cases that this became the basis of this old treatment. It is necessary that the system be made rapidly alkaline. For this purpose several alkalis offer themselves. The Potash Salts depress the heart too much. The digestion can hardly tolerate sufficient Lithia. Soda Salts have proved most satisfactory: the bicarbonate, the acetate—frequently extemporized in the kitchen from the soda package and the vinegar jug—or the citrate. I prefer an equal mixture of the citrate and acetate. Two level tablespoonfuls of soda in a quart fruit jar and vinegar added until taste is slightly acid; an ounce of the citrate is put in and enough water added to make a pint. A tablespoonful of the solution contains about 15 grains each of the citrate and acetate and such we give for a dose. Usually for the first day we give the tablespoonful in a glass of water every half hour, after this every hour until the fever is broken. A good purge should initiate the treatment and the liver should be urgently looked after all along. The diet should be simple, easily digested and plentiful. The depression of the disease seems to me not to call for stimulants but for rest in bed and generous nourishment. He who trusts in stimulants frequently kills by over stimulation. Of course the depressants are exceedingly dangerous. The

distress which suggests them usually becomes insignificant as the system becomes alkaline. After the temperature has fallen to a low figure it frequently suddenly rises discouragingly. This may be caused by an involvement of the ears resulting in earache or dullness of hearing. This condition is usually rapidly allayed by adding two drops Tr. Pulsatilla to each dose: or Pleurisy may be starting up sometimes with little or no pain and observable only by the stethoscope. One drop of Tr. Bryonia added to each dose will generally prove satisfactory, if the tincture is a good one such as our friends the Homeopaths use. Sometimes in spite of daily motions, the bowels may need sweeping out, and a dose of oil will bring the temperature down. In a few cases I have found an unsuspected Malaria keep the temperature up. For these, happy results were obtained from two grains quinine in aromatic sulphuric acid every two hours.

RESECTION OF THE CECUM AND ASCENDING COLON

By J. Shelton Horsley, M. D., Richmond,
Va.

DR. Horsley discussed the underlying causes of the abandonment of lateral intestinal anastomosis and the adoption of the end-to-end method. Cannon and Murphy have shown that in animals with the end-to-end method there was no stasis of food at the site of operation, whereas in lateral anastomosis peristalsis was abolished where the bowel was united. Dr. Horsley called attention to the

Abstract of paper read at a meeting of the Southern Surgical Association in Baltimore, Md., Dec. 17-19, 1918.

triangular space at the mesenteric border of the intestine which is sometimes infected by the operator before it is closed, and to the necessity of cleaning the bowel ends with antiseptics before suturing. He believes that a valve should be made when the small bowel is united to the large. He described a new operation based on these principles in which the end-to-end method is used and the ileum is projected into the end of the transverse colon and sutured in a manner similar to that used in his method of uniting the small bowel. In addition to this, in order to promote valve formation and increase safety, there is placed a row of interrupted mattress stitches of catgut. To relieve gas accumulation he suggests an enterostomy after the Coffey principle. He reports seven cases which are all the operations of resection of the cecum and ascending colon that he has done for ten years. All of these patients recovered from the operation satisfactorily. Two of the operations were for intussusception in infants, two for severe intestinal stasis, and three for hypertrophic tuberculosis. In one of the cases of tuberculosis there was a resection of several feet of diseased ileum after the cecum and ascending colon had been removed, thus making a double resection in this case.

Since this paper was read Dr. Horsley has done another resection of the cecum and ascending colon, using the technic described in the paper, including the valve formation and the enterostomy. At the present time (five days after operation) the patient is doing well. The pulse has not been over 104 since the operation. There has been no distension.

OBSERVATIONS ON THE WASSERMAN TEST

By Boyden Nims, Chemist, Columbia, S. C.

ABOUT four years ago the writer had occasion to make two Wassermann tests on the same sample of blood, one day it was drawn and the other several days later. The first blood showed distinctly negative while the other after keeping the sample under aseptic conditions in an ice box showed distinctly positive. At first it was thought that a mistake had been made in reporting it negative the first time, but the same experience was soon met with again and has been repeatedly met with since.

Possibly others have observed this anomaly, but if so, I have not heard it mentioned or met with it in any literature on this subject. It was my intention to investigate this matter more fully before reporting, but conditions arose that made it impossible for me to do any research along that line. Since the original observation this condition has appeared so frequently that it has become the routine practice in this laboratory to keep negative reacting sera and repeat test after about five days.

The probable explanation for the condition above reported is that the sera reacting in this way are rich in complement as well as poor in antibodies. In the processes of inactivation with heat preparatory to making test, practically all of the antibodies as well as complement are destroyed. If test is applied to such sera without inactivating there is such an excess of complement, even without the addition of the standard unit from Guinea Pig, that after taking care of the unit of antigen there is sufficient remaining to effect complete hemolysis. Thus, we

get a negative reaction with and without inactivating. After standing on ice under aseptic conditions for several days the excess of complement is lost while the antibodies remain unaffected. This being true, if test is again applied a positive reaction will result. This cannot be explained by assuming that the serum on standing acquires anticomplementary properties, for we get complete hemolysis in tubes to which no antigen has been added, frequently even without the addition of complement.

The above observations would indicate the practice of reporting Wassermann reactions in numerical terms like +, ++, +++, ++++ and 25%, 50%, 75%, 100% as useless and often misleading. A Wassermann is either positive or negative and should be so reported. If doubt exists test should be repeated, if possible until doubt is removed. The only value a numerical expression of results could have would be in reporting a series of tests on a given individual during course of infection and treatment. It is without value for obvious reasons, in comparing the degree of infection of one individual with that of another. The blood of two persons containing relatively the amount of antibodies might be tested at the same time under identical conditions, one give XX and the other XXX. If made by different serologists, in different laboratories, following different technique, even greater apparent discrepancies might reasonably be expected. This can be accounted for by assuming one sample to be much richer in complement than the other.

In making the Wassermann test, a serum having no complementary action whatever is occasionally met with. It is claimed by some accepted authorities that this condition exists only in

the sera of syphilitics. For that reason in making the test it is important always to run one tube without inactivating and without the addition of either antigen or complement. If no hemolysis occurs in this tube, it shows absence of complement and the case must be looked upon with suspicion, even in the face of a negative Wassermann.

INTUSSUSCEPTION

By R. N. Pollitzer, M. D., Charleston, S. C.

INTUSSUSCEPTION while by no means a common condition, yet in infancy is of sufficient frequency to be considered in all abdominal cases. Treves estimated that 3-8 of all cases of intestinal obstruction are due to intussusception and that 50% of these occur under the 10 year and 25% during the 1 year.

The anatomical lesion is brought about by the prolapse or slipping of one portion of intestine into the lumen of an immediately adjoining part. This may occur in any region of the gut, but 70% of the infantile cases are of the ileo-cecal variety.

This accident is brought on by irregular peristaltic action as has been experimentally proven, but what initiates this is not known. Different authors have made various surmises, such as a sudden jolt or gaseous fermentation but no satisfactory explanation has been given. A loose or long mesentery may account for some cases, or at times the presence of enlarged lymph-nodes or a polyp. As a rule however the lesion is found in healthy infants and the exciting cause is not discovered. In males it is far more

Read before the South Carolina Medical Society (Charleston County) June 28, 1918.

common than in females; Gay reported in a series of cases under one year, 163 boys and 93 girls. Holt states that he has seen almost twice as many males as females, and that 3-4 of all cases in childhood occur in the first year.

The pathology is very simple, as a result of the invagination, passive congestion results, lymph soon being thrown out and later adhesions being formed. Early there is obstruction, and after the lapse of time gangrene.

The symptomatology is so characteristic that once seen the picture is not likely to be forgotten. As a rule the physician on arriving is told that the infant while nursing suddenly began to scream as though in great pain and that it could not be pacified. At the same time it became markedly pale and looked as if it were about to faint. As a matter of fact there is a profound though transient condition surgical shock. Later on and throughout the day there is some vomiting. Early the vomitus is stomach contents, but after a long time it becomes stercoraceous. The bowels for some time do not move but often after an attempted enema or the insertion of a suppository some mucus and a little blood is passed. This evacuation is of great significance, being due to the rupture of the engorged intestinal veins and the mechanical irritation of the bowel. The paroxysmal pain is apt to recur each time the gut is forced further into the intussusciptions until gangrene occurs. The temperature remains normal or subnormal until late. The pulse is generally rapid. Urination is generally infrequent, and commented on. On inspection of the abdomen nothing is noted except the absence of distention. On palpation as a rule there is no rigidity, but a mass which is fairly soft and somewhat movable is generally encountered. It is not necessarily in

the region whence it originated, as it is often twisted out of position. The size and shape vary but most often it seems sausage shape and about the size of a large egg. Sometimes because of a very fat abdominal wall of resistance or deep location the tumor can not be felt, but in these cases the administration of an anaesthetic generally confirms the previous suspicion. The diagnosis in most cases is easily made by the symptoms though of course it is not absolute without the mass being felt. Rectal examination should always be made if in doubt as often the tumor is best palpated thus. The reason that some diagnoses are missed is because sufficient importance is not attached to the history and the abdomen is not examined. On the other hand the majority of cases of intussusceptions seen in the dead-house do not represent failures in diagnosis on the part of the clinician, but are the result of irregular peristalsis just after death.

It is quite possible though not admissible of proof that some of the severe colic seen in infancy is the result of a slight and temporary intussusception which spontaneously is reduced.

In the differential diagnosis, Enteritis, Appendicitis, Scoury, and Impacted feces are to be considered. In the first there is more stool and less blood, the movements are more frequent, the history entirely different and no tumor is felt. Enteritis is probably never mistaken for intuss, but intuss. is often carelessly considered enteritis. Appendicitis generally gives an entirely different picture, the only point of similarity being that both are acute and cause violent pain. Usually in appendicitis fever comes on early. Of course a large or inflamed appendix may produce an intussusception, and

there the complete diagnosis could only be made on the operating table.

Scurvy off hand seems impossible of confusion, yet where there is a hemorrhage into the intestine, with pain vomiting and a palpable mass unless there are other characteristics the differentiation would be exceedingly difficult. Still has reported such a case.

Impacted feces produces a distinct mass but the other diagnostic points are lacking. In brief the diagnosis rests on the presence of abdominal pain, shock, vomiting, the passage of blood and generally the presence of an tumor.

The prognosis depends on but one factor; and that is the duration of time between the onset and the opening of the abdomen. All other considerations are secondary. Early the outlook is very good, late where often an extensive resection is necessary the outcome is often fatal. In 1884 Keen wrote that published statistics of laparotomy in these cases are far from encouraging. The mortality as given by Treves for the first year is 80 per cent, but in the reducible cases it is only 38 per cent as against 88 per cent in the irreducible. Reducibility is purely a matter of duration and to a lesser extent of surgical skill. With the earlier diagnosis of cases and the improvement in surgical technic the death rate in this condition is constantly being lowered.

Formerly various therapeutic procedures were in vogue. The chief measures being the administration of purgatives, of effervescent drinks of oil and of metallic mercury. None of these did good naturally even accomplished harm. Later on the introduction of air and of water forcibly into the rectum was frequently and even today some authors advise the use of water, though they all caution against force. In my

opinion this is dangerous because of the liability of the gut to rupture, and further it affords no opportunity to see whether the intestine is not too gangrenous for the circulation to be restored. The very best treatment is to open the abdomen as soon as the diagnosis is made, the patient having been transferred to a hospital. If it is possible for the intussusception to be reduced without trauma and a resection is not necessary because of gangrene, then the operation is of short duration and generally followed by a rapid and complete recovery.

I have had three of these cases of which all are living today. Unfortunately the record of my first case can not be found so I can only give a few facts concerning it and those from memory. This was a white male about 6 mos. in the best of health and a nursling. The onset was typical and I distinctly made out an abdominal tumor of the characteristic size and shape. I advised operation but as the people would not hear of it, the injection of water by the bowel was permitted. Becoming frightened and placing a low estimate on the value of my judgment they carried the child to another physician who made no examination, and did not know that I had even seen the child. He assured them that it was merely indigestion and that the baby would soon be alright. His prediction based on a wrong diagnosis luckily proved correct. Evidently this was a rare case where water pressure effected a cure. However I cite this case to show how not to treat a case, as it is the exception to the rule. My other cases occurred in Sept. '17, and Feb. '18. Both were white males of 7 mos., and nurslings. In each baby the history characteristic, there was the passage of blood from the bowel and vomiting ensued. In

the Sept. case an abdominal tumor was easily made out, while in the Feb. one because of a fat wall it was not until a general anaesthetic had been administered that the mass could be felt. In the first of these two cases only 7 hours intervened, but in the second there were 26. Each case was operated upon by Dr. A. J. Jervey who reduced the intussusception speedily and safely, the gut in each case quickly recovering its color. Ether was administered to both and the stay of each in hospital was less than 2 hours. The infants made an uneventful recovery and their physical and mental balance sustained far less injury than that of their parents.

THE IMPORTANCE OF EARLY RECOGNIZING MENTAL DISORDERS

By J. F. Munnerlyn, M. D., Medical Director
State Hospital for the Insane
Columbia, S. C.

THE problem of the care and treatment of the insane is an important one. It assumes greater moment because of the apparent increase in the percentage of the insane, neurapathic and mentally deficient, that may be found among all civilized peoples, during the past three or four decades.

The Legislature of seventeen eighty-eight in the State of New York, authorized justices of the peace to chain persons who were "furiously mad," or "so far disordered in their senses" as to be dangerous, if permitted to go at large. It is not so long a time since the insane were believed to be possessed of devils, and consequently they were ducked, whipped, tortured, chained in dungeons, and occasionally burned. Indeed, it is scarcely over eighty years since a patient in Bethle-

hem Hospital, in the city of London, was kept for twelve years in a cell, with an iron collar riveted around his neck, and iron bands and rings around his wrists, arms and ankles, and neck being fastened to the wall and the legs to a rude box of filthy straw.

The present method of caring for the insane is the result of a gradual development, which represents nearly a century and has reached a plane, which is quite consistent with the modern progress of science. Asylums are no longer looked upon as merely detention places, in which the essential point of view was the safeguarding of the public against dangerous lunatics, but they have now come to be recognized as hospitals, and they are approaching nearer to that ideal every year. Thus, with a broader and more comprehensive understanding of mental diseases, the insane patient is now regarded by the psychiatrist as a mentally sick individual. With this modern view of insanity, it is obvious that the principles of preventive medicine should occupy a great field of usefulness in combating one of the greatest maladies known to the human race.

Probably thirty per cent of insanity is due to generally recognized disease producing causes, such as syphilis, diseases of the blood vessels, etc, which act by interfering with the structure and function of the brain. As a rule, no mental peculiarities herald the coming of a psychosis of this type, they usually begin suddenly, are the result of plain physical causes, and are principally of the kind which have been dealt with most successfully in the field of preventive medicine. But in another type, known as the constitutional mental disorders, we find a more complex problem. Here the break-down does not come out of a

clear sky, but is usually foreshadowed by certain peculiarities or traits that give warning of an impending danger. In the beginning, such traits may indeed, be obscure, nor does it mean that such individuals are necessarily intellectually deficient, but the fault usually lies in another direction, namely, there is a lack of mental poise. They are individuals, who are more satisfied with "fruitless brooding" endless reading may appeal to them more than the doing of things. Such persons, at times, appear exceedingly moody and vacillating with self introspection associated with vicious and even criminal tendencies. Another type of persons have a tendency to suspiciousness, to an undue sensitiveness, a tendency to feel that they have been slighted without provocation—others show strong emotional reactions, are inclined to get depressed at the slightest provocation, or become unduly hyperactive. Such persons ordinarily present in their clinical aspect defects, which are usually considered harmless, or of too trivial a nature to cause any special alarm. But such peculiarities, if unaltered, have a tendency to grow, and we too often find such persons unprepared when adaption to new situations are required, such as those which come with adolescence, with marriage, with child-birth, the involutional period, etc. This type of individual seems to lack the ability of bringing about a proper adjustment between internal and external relations. He may not lack energy, seeks employment, but after securing work, he soon becomes dissatisfied, gives up his work, but immediately begins to seek other employment. In such individuals there usually exists some long standing discord of the emotional life, and the rapid change of employment, is merely a poor attempt to escape mental con-

licts or to satisfy deeply rooted desires, which do not appear on the surface. A case selected from our records illustrates very aptly how a patient who became hopelessly insane, had presented for many years, certain signals of an impending danger. A young woman, twenty-three years of age, was admitted to the Hospital ten days after marriage. She had always shown certain peculiarities, she attended school with the result that she was able to get along with her studies fairly well, but she was considered an unsociable child. She got along pretty well when left alone, but was easily irritated, and as told by her teacher, was frequently subject to fits of "pouting." In company, she was silent, took no part in what was going on, and very often left the room. She grew up in poor circumstances, and not in a healthy environment. At the age of twenty, she began to brood without apparent cause. A few months later, she became engaged to a young man, whom she had been intimately associated with for a number of years. A few months after the engagement was announced, it was noticed that the brooding became more intense, she became apprehensive and developed the idea that her fiance might prove untrue. The parents, not realizing the seriousness of the situation, and thinking that they were acting for the best, insisted on the marriage. Consequently, she was married with the result that she at once broke down with a hopeless form of insanity.

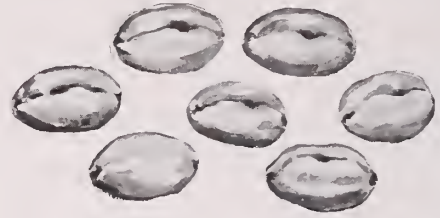
This case is only typical of a number of such cases that have come under our observation, illustrating the inability of such persons to adapt themselves to new situations.

It is among such cases that the medical profession could accomplish immeasurable good by early recognizing

these abnormal tendencies, and with the institution of appropriate treatment, do much in bringing about a proper adjustment between internal and external relations before the final catastrophe occurs.

One of the most promising fields for early treatment as well for prevention, is among the children in the public schools. In New York city, and in a few other places, provision has been made for the examination, by physicians specially qualified in mental disorders, of backward or otherwise deficient children, who are referred to the examiner by the teachers or parents. Special provision is also made for the special educational and other methods, which are considered necessary in the treatment of such cases.

It is true that in a certain per cent of these cases, the actual break will come regardless of early recognition and treatment, but if we are able to early recognize these abnormal tendencies and by instituting treatment bring about proper adjustment before the actual catastrophe occurs, in a few, our efforts would not be in vain.



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Rice**

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(3011)

SOCIETY REPORTS

OCONEE

The Oconee Medical Society met at Seneca, Jan. 1st, 1919 with an average attendance. The society discussed the fee bill and as a result the members present were unanimous in the opinion that there should be a decided increase over the customary charges which have changed but little in twenty-five years. No binding obligation will be exacted but the members in their several localities will no doubt increase their fees as seems equitable to all parties concerned in view of the enormous increase in the cost of living and the pursuit of the practice of medicine. The following officers were elected:

Dr. J. H. Johns, Pres., Westminster.
Dr. E. A. Hines, Secy., Seneca.
Dr. J. S. Stribling, Delegate, Seneca.
E. A. HINES,
Secretary.

PICKENS

I am enclosing the results of the election of officers for the year 1919.
President, Dr. J. O. Rosemond.
Vice-President, Dr. W. B. Furman.
Sec-Tres, Dr L. L. Jameson.
Delegates to State Association, Dr. W. A. Tripp '19, Dr. Woodruff '20.
Board of Censors, Dr. J. E. Allgood '19, Dr. Furman '20, Dr. Clayton '21.
L. L. Jameson,
Secretary.

READINGS

CHLORAZENE IN GENITO-URINARY CASES

Dr. E. Styles Potter, Visiting Surgeon of the West Side Hospital, Genito-Urinary Department, New York City, has the following to say of irrigation in the treatment of urethritis:

"Irrigation has long been known to be a useful method of applying locally the various remedies that have from time to time been considered favorably in the treatment of the simple and septic varieties of urethritis. After an experience extending over many years and thousands of cases and including the use of permanganate of potash, hydrargyrum bichloride, boric acid, carbolic acid, protogol, argyrol, tr. iron chloride, infusion of common drinking tea, zinc chloride, normal saline solution, etc., I now wish to call attention to the fact that Paratoluene-sodium-sulphochloramide (Chlorazene) used as an irrigation remedy seems to possess most unusual curative effects. It has the advantage of not being irritating, is evidently a powerful germicide and appears to have a slight astringent effect as well. I have been using this remedy in acute simple and septic anterior urethritis for some months and really the results obtained have led me to regard it as a very satisfactory remedy in the treatment of these conditions.

I have become to regard CHLORAZENE superior to permanganate, protogol, or other irrigating solutions in general use, and now use it exclusively."

THE LOGANBERRY AS IT GROWS

The Loganberry grows in a cluster, like grapes, suspended below the leaves.

Readers who are familiar with the Loganberry must, of course, have noticed that the illustration of the Loganberry in the Jiffy-Jell page in our January issue, was inverted.

We are pleased to call attention to the error, particularly as otherwise readers who may not have seen the Loganberry growing, might form the impression that this berry grows upright, instead of being suspended in a cluster.



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Modifier That Really
Modifies

MODIFICATION as applied to milk is a term of very elastic meaning. It may include simple dilution with water, addition of cane sugar, lime water, and various other agents. Dennos Modification, however, produces changes in cow's milk that have important chemical and physiological significance in the feeding of infants and invalids.

A Suggestion
In Pneumonia, Influenza and other similar conditions, Dennos with proper amount of milk furnishes a high percentage of rich, digestible carbohydrates, which as Tibbles points out, are essential in a fever dietary.

Physiologically considered, Dennos changes the milk from a hard curdling to a soft curdling food. The fine flocculent particles are bland, non-irritating and readily absorbed. For this reason it has met with unusual success in cases where vomiting or diarrhoea are persistent symptoms.

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A B S T R A C T S

THE STANDARDIZATION OF HOSPITALS FOR THE INSANE

(Continued from January Issue)

Some reference has already been made to laboratory requirements. Every hospital should be prepared to carry on, as routine measures, the various tests so necessary as aids in diagnosis, not only for mental disease but also for ordinary physical ailments. The medical staff should be on the alert to secure permission for post-mortem examinations in the interest of science and the welfare of humanity. Facilities should be provided for the proper study of the material obtained. The laboratory ought to be in charge of a trained pathologist with adequate assistants to enable him to do research work.

One frequently hears of the "ever-widening influence of psychiatry," as a consequence of which institutions for the insane and the officers connected with them can no longer restrict their activities to a small sphere of the "asylum," as formerly designated. The facilities for advice, observation, and treatment must be extended by the establishment of out-patient departments and psychiatric wards in general hospitals in the large centers of population. In this way, as is shown by actual experience, thousands of persons may be reached and benefited in the early and borderline stages of psychosis development and restored to mental health in a short time, avoiding what is now so often wrongfully considered the stigma of commitment in a hospital for the insane. The frequently unwieldy, slow, and public

methods of commitment procedures, often treating a prospective patient as a criminal, incarcerating him in a jail, escorting him to the hospital, it may be, handcuffed and in the custody of an officer, must be replaced, so far as possible without endangering his constitutional rights, by prompt and expert examination, care of trained attendants, and quick and unobtrusive methods of conducting to the hospital. The system of voluntary admission must be extended, bringing within reach of many patients, who themselves often realize the necessity for treatment, the early care that insures a brief residence at the hospital. Such facilities are not only of great benefit to the patient, but are really a matter of economy to the state, shortening the length of care in the hospital, consequently lessening the expense and, it may be, restoring sooner a useful member of the community.

There should be a system of parole of suitable patients by reason of improvement or recovery, affording an opportunity for the trial return to self-support for a period of some months, during which time the patient may return to the hospital for further care and treatment, without a repetition of the legal formalities, should it be deemed necessary. The parole system should be combined with an efficient after-care agency, preferably a member of the medical staff or a social worker, who may have a certain amount of supervision over the paroled patient. Such an after-care worker may render service in advising the return of the patient, if indicated, in assisting in a change of habits or environment, in helping to obtain a suitable position,

in arousing a kindly, helpful attitude toward the former patient, in combating the feeling of suspicion or lack of confidence so often met with, and in adjusting difficulties in the home, family, or environment which otherwise might cause a return of the psychosis. The social worker also may be utilized in obtaining additional information from the friends and relatives of patients necessary for arriving at a proper diagnosis. In other words, the state hospital must be the center of advice for mental health, an active rather than a passive agency for good. Without such facilities for the furthering of mental hygiene, a state hospital for the insane cannot be considered fully equipped for adequate service to the public.

It is neither practicable nor essential to elaborate further as to the business methods or other details of administration. These must be left to the executive officer, whose training and experience should be such as to qualify him to solve such problems. And, finally, it must be realized that while present-day methods are undoubtedly the result of progress, the ultimate stage has not yet been reached. Radical changes in methods will be met with from time to time, it being only necessary to exercise judgment in adopting the same.

IT IS A WISE PHYSICIAN WHO KNOWS HIS OWN DANGER

Last week the deaths of eighty-one physicians were recorded in The Journal, occupying three pages. This week the deaths of 174 physicians are recorded, occupying five pages. The total number of deaths recorded in these two issues is 255, and of these 154 are definitely known to have been due to influenza or pneumonia; undoubtedly

in the majority of instances in which the cause is not given, it was influenza. These obituaries are records of sacrifice to duty. A layman may, if he desires, keep from exposing himself to any infection; but the physician must go when called without thought of consequences to himself. However, as one considers the list one wonders whether or not some of these deaths might have been prevented by adopting some of the simple precautionary methods that have been suggested, such as the wearing of the face mask. This thought arose when we received a letter from a physician who, in sending in the names of two physicians who had died, said: "Dr. A. visited at the Great Lakes Naval Training Station an old patient who had influenza. Two days after his return home, Dr. A. came down with the disease. Dr. B. was called to see Dr. A. and examined his throat, Dr. A. coughing in his face. Two days later Dr. B. had the typical manifestations of the disease" It is proverbial that physicians, like preachers, give advice which they themselves do not consistently follow. It is a wise doctor who knows his own danger.—*Jour. A. M. A.*, Nov. 2, 1918.

NO SPECIFIC "CURE" FOR INFLUENZA

The present epidemic, as was to be expected, has given rise to the publication in the newspapers of all kinds of "sure cures." Their number is legion, and they vary in character from those with a semiscientific basis to others with no basis whatever. Some could be classed under the term ridiculous. Many persons recommend certain methods of treatment from purely altruistic motives, others for financial gain. Almost all of the proponents of alleged specific methods are

bombastically enthusiastic. Hyperenthusiasm applied to moral or esthetic ideals is a praiseworthy emotion, but as related to medical science is usually a delusion and a snare. The research worker should view his results with a cold, dispassionate conservatism, before considering publication with resultant harm to himself and the public. Many of the alleged cures and remedies now being recommended probably will do more harm than good. The United States Public Health Service, having been besieged with inquiries regarding this and that method of treatment, has issued a special bulletin in which it is emphasized that there is no specific cure for influenza yet known and that the chief reliance must be placed on good hygiene, good nursing and symptomatic treatment.—*Jour. A. M. A.*, Nov. 2, 1918.

BARLEY WILL CONSERVE WHEAT

"Barley," says M. Hindhede, the Danish exponent of economy in nutrition, "is too valuable as a human food to be used in these hard times as fodder for pigs or in the production of beer." This conclusion was based on extended dietary experiments on men in which barley, margarin, sugar, milk and fruit represented the range of variety in the food intake. The cereal was used mostly in the form of coarse groats, yet it was utilized almost as well as comparable coarse whole wheat bread; and doubtless a better milled or better cooked product would have shown even superior digestibility. The availability of the very coarse cereal used was by no means equal to that of the finest wheat bread or similar refined products, but its wholesomeness seemed to be beyond question. An exclusive diet of cereals is never ideal, whatever the source of

the grain used. But many persons have depended so largely on wheat in the past that they fail to recognize the equivalent merits of its substitutes. We have already spoken a good word for barley in support of the well founded contentions of the U. S. Food Administration. Barley is extremely hardy, and is grown as far north as the Arctic Ocean in Russia and as far south as the Nile and the equator in eastern Africa. Its drought-resisting qualities make it particularly valuable as a crop in somewhat arid regions. Barley is believed to have been one of the first cereals used by man and is today probably the best of the substitutes for mixing with wheat in bread-making.—*Jour. A. M. A.*, Nov. 2, 1918.

PRURITUS ANI

A summary of eight years original research work on the etiology and treatment of pruritus ani is published by D. H. Murray, Syracuse, N. Y. (*Journal A. M. A.*, Nov. 2, 1918), who claims there is no other disease except cancer of which the etiology has been so little understood. In the summer of 1910 he was led to a line of investigation of the bacteriology of the anal skin, in which he found *Streptococcus fecalis* as the only constant organism. After serious consideration he was led to try an autogenous vaccine of this organism, and was astonished by the surprisingly good results obtained from its use. He never promises permanent results but most of his patients have never relapsed to as severe a condition as existed before. The author feels justified in saying that pruritus ani is caused by an infection made by one of the streptococcus group, or associated with it. The infection may be the primary, secondary, or aggravating cause. The first of these may have

passed away when the second and third begin to act. Whether the infection is due to original lack of opsonins or to their lessening by an invading organism is not yet known. Murray's statistics of 4,000 cases of rectal trouble show only about ten per cent. of pruritus ani, indicating that the occurrence of the latter is a coincidence. Like pruritus vulvae and pruritus scroti it is a skin infection, rarely extending above the white line of Hilton. The sphincter muscle if normal does not allow leakage on the anal skin and the moisture accompanying pruritus is produced locally by the low-grade inflammation. The presence or absence of bacterial infection is of great prognostic value if operation is expected to cure. The phagocytic power of the blood must be improved for the betterment of the condition and there may be complicating infections. Pruritus of the genital and anal regions are not a part of a diabetic condition and their only prophylaxis lies in bathing the anal skin after each defecation.

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(3006)

BOOK REVIEW

THE MEDICAL CLINICS of Nor America, U. S. Army Number, September 1918. Published Bi-Monthly By W. B. Saunders Company, Philadelphia and London. Price \$10.00.

THE SURGICAL CLINICS of Chicago, December, 1918. Volume 2—Number 6 with 63 illustrations. Index Number. Published Bi-Monthly. W. B. Saunders Company, Philadelphia and London. Price per year \$10.00.

MEDICAL CLINICS OF NORTH AMERICA (The New York Number) The Medical Clinics of North America. Volume II Number 1. (The New York Number, July 1918). Octavo of 311 pages, 57 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly Price per year; Paper, \$10.00; Cloth, \$14.00.

THE SURGICAL CLINICS OF CHICAGO. Volume II Number 5 (October) 1918. The Surgical Clinics of Chicago, Volume II Number 5 (October 1918). Octavo of 193 pages, 87 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Published Bi-Monthly: Price per year. Paper \$10.00; Cloth \$14.00.

SURGICAL TREATMENT. Volume II. Surgical Treatment. A Practical Treatise on the Therapy of Surgical Diseases for the use of Practitioners and Students of Surgery. By James Peter Warbasse, M. D., Formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate Desk Index Volume. Volume II contains 829 pages with 761 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Per set (Three Volumes and the Index Volume). Cloth \$30.00 per set.

We accorded the first Volume of this work a favorable review and the second Volume is no less deserving.

The following regions of the body are considered: The Head. The Spine. The Neck. The Thorax. The Breast. The Abdomen.

PRINCIPLES AND PRACTICE OF OBSTETRICS. New (3rd) Edition, Thoroughly Revised. Principles and Practice of Obstetrics. By Joseph B. Delee, A. M., M.D. Professor of Obstetrics at the Northwestern University Medical School Third edition,

thoroughly revised. Large octavo of 1089 pages, with 949 illustrations 187 of them in colors. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$8.50 net.

Few books on Obstetrics have reached the perfection from every point of view attained by De Lee's Text Book. This the 3rd. edition has been carefully revised and by a special arrangement presents much of the latest European advances. We heartily commend the book to our readers.

NEOPLASTIC DISEASES. Neoplastic Diseases. A text-book on Tumors. By James Ewing, M.D., Sec.D., Professor of Pathology at Cornell University Medical College New York City. Octavo of 1027 pages with 479 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$10.00 net

The author here presents within reasonable space and in accessible form the main features of the origin, structure, and natural history of tumors. The chapter on Cancer of the Uterus among other things says: of the woman who enjoy the services of the best American operators 35 per cent are inoperable, the operative mortality is 15.17 per cent, after 5 years 8.39 per cent are well, and 1 per cent of the total are permanently cured. Cullen is quoted as saying that 50 per cent of the cervical cases are inoperable when first seen. The book is a highly specialized invaluable contribution to our knowledge. The bibliography is very complete.

A MANUAL OF DISEASES OF THE NOSE, THROAT, AND EAR. Fourth Edition, Thoroughly Revised. A Manual of Diseases of the Nose, Throat and Ear. By E. B. Gleason, M.D., Professor of Otology in the Medico-Chirurgical College Graduate School, University of Pennsylvania. Fourth Edition, thoroughly revised. 72mo of 616 pages, 212 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth, \$3.00 net

Gleason's manual is an exceedingly satisfactory book for the busy physician. The author is conservative and instead of describing numerous complicated operative procedures is content to describe one or two which he has tried out and found effective. We know of no book which the general practitioner will find more useful.



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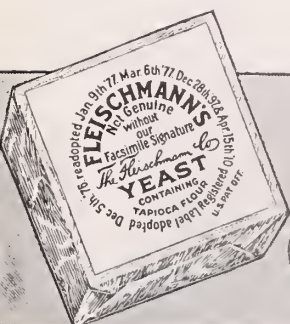
The importance of this investigation prompted us to prepare, in convenient filing form, a reprint of the report, with information on the production of the yeast. Copies have been distributed to physicians. If not received by you, please advise.

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The Journal OF THE South Carolina Medical Association



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J. LaBRUCE WARD, M. D., Columbia, S. C.

EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

CHILD HYGIENE BUREAU ESTABLISHED

The campaign of continuous effort for over three years to establish a Bureau of Child Hygiene of the State Board of Health was successfully concluded when the recent Legislature appropriated ten thousand dollars for this purpose. Many of our members will recall that at the Spartanburg meeting of the State Medical Association, 1917, a symposium on child welfare was the leading feature of the program and a Child Hygiene Bureau urged.

Subsequently the State Board of Health appointed a committee consisting of the following names: Dr. E. A. Hines, chairman; Dr. Wm. Eggleston, Dr. James A. Hayne, to devise ways and means to create this new

bureau as a department of the State Board of Health. This committee was aided very materially in its efforts at publicity by various organizations and especially by the State Council of Defense.

The argument presented to the Legislature by the State Board of Health which finally secured the appropriation, follows:

The Necessity For a Bureau of Child Hygiene

The only legislation which this State provides for the safeguarding of children's lives is a Bureau of Vital Statistics which requires the registration of births and deaths.

Vital Statistics.

This Bureau of Vital Statistics is functioning well, and the result of its

activities serves to demonstrate the need for further legislation along this line. It has shown us the necessity of a Bureau of Child Hygiene, because the number of deaths among children under two years of age is **FAR ABOVE THE AVERAGE DEATH RATE IN OTHER STATES.** We feel that something must be done to improve this situation. Another point brought out by the Bureau of Vital Statistics is the appalling number of deaths of mothers at child birth. Any maternity hospital that loses one woman for every 1,000 births is considered to have too high a death rate; the fact that our statistics show **TEN TIMES** that many women to die at child birth, means that many women to die at child birth, means that there has been something radically wrong with our system.

Law Governing Midwives.

There is absolutely no law governing midwives in this State. They are neither licensed nor inspected, nor do they know anything in regard to what is necessary to preserve life at this time. No one, no difference how ignorant she may be, is debarred from practising midwifery. We allow dirty, ignorant women to proclaim themselves capable of caring for mothers at this time, when they should have the most skilled attention. There is no law requiring the use of drops in new-born babies' eyes, and yet we know that the greatest per cent, of blindness in the world is due to this neglect.

Physical Inability.

The foregathering of our young men in response to the draft and the call for volunteers, has forced upon us one startling fact. Of all those who applied for army service, more than one-third failed to pass the physical examination. This physical inability

was the result, in most cases, of some slight defect which might have been corrected in childhood. This deplorable state of affairs must have been due to lack of knowledge on the part of parents in the rearing of children.

Bureau of Child Hygiene.

For the above reasons we are asking this session of legislature to establish a **BUREAU OF CHILD HYGIENE.**

Function of Bureau.

The functions of this bureau would be:

1. Registration of births.
2. Pre-natal care of children.
3. Control of midwives.
4. Use of drops in every new-born baby's eyes.
5. Establishment of baby centers.
6. Medical inspection of school children.
7. Establishment of clinics for correction of physical defects.

Appropriation.

For the administration of this Bureau, we are asking an appropriation of **TEN THOUSAND DOLLARS.**

Activities of Bureau.

The activities of the Bureau will be promoted by the county and community nurses. The work of the county nurse must of necessity be both varied and complex. It will begin with the school as the point of contact.

The nurse will correct sanitary condition of school buildings; she will assist in medical inspection of school children; she will direct proper teaching of health principles; from the school she will enter the home; she will establish pre-natal and infant centers, where classes of mothers will be organized; she will have under her care, as nearly as possible, all bottle-fed babies; she will supervise mid-

wives; she will establish clinics for the correction of physical defects in children; the control of tuberculosis and other communicable diseases will be no small part in her duties.

PROVISIONAL PROGRAM FLORENCE MEETING

The House of Delegates will meet at 10 A. M. April 15. The evening of the 15th will be given over to entertainment. The Scientific program will be completed April 16th.

The address in Surgery will be delivered by Dr. J. Shelton Horsley, of Richmond, Va., one of our most distinguished Southern Surgeons. The provisional program follows which will be rearranged and further amplified for the final program:

1. The Treatment of Hypertrophy of the Prostate in three stages: for the borderline case. By C. A. Mobley, Rock Hill, S. C.
2. Roentgen Examination for Empyema of the Pleura. By A. Robert Taft, Charleston, S. C.
3. Laboratory Diagnosis—An essential element in Modern Medicine. By F. W. Routh, Columbia, S. C.
4. Anemia in Childhood. By R. M. Pollitzer, Charleston, S. C.
5. Psychosis following Influenza.

By J. F. Munnerlyn, Columbia, S. C. Medical Director State Hospital for the Insane.

6. Diazo, Russo and Weis Reactions in Typhoid Fever. By Francis B. Johnson, Charleston, S. C.

7. Some results of Influenza. By L. O. Mauldin, Greenville, S. C.

8. Some interesting aspects of the recent Influenza Epidemic. By J. Heyward Gibbes, Columbia, S. C.

9. A report of 41 Cases of Foreign Bodies in the Air and Food Passages. By E. W. Carpenter, Greenville, S. C.

10. Pneumonia of Influenza. By T. L. W. Bailey, Clinton, S. C.

11. Anaphylactic Manifestation of Foods in Children. By D. Lesesne Smith, Spartanburg, S. C.

12. The Action of the Abdominal Muscles. By W. F. R. Phillips, Charleston, S. C.

13. Pathologic Anatomy and Bacteriological Findings in thirty-one Autopsies during recent Epidemic of Influenza. By Jessie W. Smith, U. S. Naval Hospital, Charleston, S. C.

14. School Medical Inspection in Rural Schools. By L. A. Riser, Columbia, S. C.

15. The Development of a Bureau of Child Hygiene by The State Board of Health. By Edgar A. Hines, Seneca, S. C.

ORIGINAL ARTICLES

OBSERVATION ON 1400 CASES OF PNEUMONIA.

By George A. Clark, First Lieut., M. C.,
U. S. A., Base Hospital, Camp
Jackson, South Carolina.

IT is not within the scope of this paper to give a comprehensive survey of pneumonia, its bacteriological, clinical or therapeutic aspects. Such information can be obtained from the current medical literature and reports from the research laboratories such as the Rockefeller Institute. However there has been some question among the medical profession as to the practicability of intensive clinical and laboratory study of this disease, both in civil and military life. So it will be my privilege to describe to you in as brief a manner as possible the routine management of cases of pneumonia at the Base Hospital, Camp Jackson, S. C., under the supervision of Major Herriek, Chief of the Medical Service. The material at times has been overwhelming. The amount of laboratory work of a standard routine character has been modified from time to time to meet the various emergencies. The careful analysis of this material will require study that we are not able to give, as our sole purpose is to return men to their posts as soon as they are physically fit. There are a few general conclusions that can at present be drawn from the facts up to date that may be of interest to you.

Pneumonia is the most serious en-

demic and epidemic disease in the army. This has been more forceably brought to mind because of the elimination of typhoid fever and smallpox. These last two diseases have yielded to prophylactic vaccination. Pneumonia presents a more difficult problem. It is a composite disease. The only short-cut to success seems to be by the most careful laboratory analysis in order to separate it into its various sub-types, which can, in turn be attacked as individual concrete problems. So important is this that the Surgeon General of the Army has appointed a Pneumonia Commission composed of Colonels Welch, Russell and Vaughan and Dr. Cole of the Rockefeller Institute. They visit the various camps, supervise the handling of epidemics and standardize the laboratory work. They have found that the location of a camp has very little to do with the sickness.

Acute infections are almost in direct proportion to the number of men from the rural districts. The public should be informed of this fact, for they have unjustly criticized certain camps during the first year of the war when respiratory epidemics were at their height. The men from the South apparently were more susceptible than Northern men. A majority of these had never had childhood diseases. Measles, mumps and scarlet fever affected them very seriously. Complications of pneumonia and bronchopneumonia were common. If a prophylactic vaccine of pneumonia could be found it would do much to cut down the death rate. The Commission has given this their attention. Pre-

Read before the Columbia Medical Society,
Columbia, S. C., Nov. 11, 1918 and
approved for publication by the Surgeon
General.

vions work has been done in South Africa. Lister made an autogenous vaccine of three strains of pneumococci and gave it to the workers of the Diamond Mines on the Rand. He reported that no pneumonia of these three groups developed among the vaccinated. Cecil and Austin at Camp Upton have continued this work and have vaccinated 12,000 volunteers among the soldiers. In a period of over six months there have developed no cases of the type of pneumococci against which prophylactic vaccination was instituted.

Camp Dix and Camp Jackson have just begun this work upon the receipt of vaccine from the Government Laboratories at Washington, D. C. This vaccine is put up in oil and is given in one injection of thirty billion mixed 1-2. and 3 pneumococcus. It is given subcutaneously and with oil as a vehicle is absorbed very slowly thus giving almost no reaction except a local hyperaemia. The efficacy of this vaccine in a large series of cases extending over a longer time must be determined before prophylactic vaccination against pneumonia can be made universal in the army. The results thus far are gratifying as types I, II and III of pneumonia represent about 80% of this disease.

II. We owe to the Rockefeller Institute most of our recent knowledge concerning pneumonia. They have studied this problem with the aim in view to institute specific Therapy based on the particular micro-organism causing the disease. In a group of 529 cases they found:

Diplococcus pneumoniae	454
Friedlander's Bacillus	3
Bacillus Influenzae	6
Streptococcus pyogenes	7
Streptococcus mucosus	1
Mixed and undetermined infections	54

The vast majority of lesions are caused by varieties of diplococcus pneumoniae. They have found that cases of pneumonia caused by this organism divide themselves bacteriologically into types:

Types 1.	33%
Type 2.	29%
Type 2. (a) (atypical)	4%
Type 3.	13%
Type 4.	20%

These types can be determined by examination of the sputum in from 6 to 8 hours. An attempt was made to produce antipneumococcus serum for these groups. For type 1, a successful serum has been made. The manner of testing and standardizing this serum is complicated and information can be obtained as to its procedure in 'Monograph No. 7,' of the Rockefeller Institute, 1917*. The serum has shown definite results, for it has reduced the mortality of type I infection from 25-30% to 7%. With statistics from a large series of cases the percentage will probably be lower. It stops the spread of infection and removes bacteria from the blood stream, unless instituted late in the disease, when an overwhelming infection is present. This can be demonstrated by repeated blood cultures. And blood cultures, by the way, give an index of the severity of the disease and an aid in prognosis that is extremely valuable considering the simplicity of the procedure.

III. Perhaps it would be interesting to take a birds-eye view of the work in the Pneumonia School at

*Foot Note: Monograph of the Rockefeller Institute of Medical Research No. 7, October 16, 1917—Acute Lobar Pneumonia-Prevention and Serum Treatment by—Oswald O. Avery, M.D. H. T. Chickering, M.D.—Rufus Cole, M.D. and H.R. Dochez, M.D.

Camp Jackson, S. C., as conducted by Capt. Chickering, formerly of the Rockefeller Institute. A pneumonia case is admitted to the hospital ward. Within a few minutes a specimen of sputum is placed on your desk in the laboratory. You carry out the following tests that are based on these few facts.

1. Pneumococci are soluble in Bile.
2. Pneumococci are very pathogenic to white mice. An injected animal dies in from 12 to 36 hours and a pure culture of pneumococcus can be obtained from the peritoneal exudate and hearts blood.

3. Pneumococci grow readily in neutral sugar bouillon containing defibrinated blood, the so called Avery medium.

4: Pure culture can be agglutinated by their respective sera: similar to the Widal reaction of agglutination in typhoid and para-typhoid fevers.

5. The pneumococcus in its growth elaborates a soluble substance which produces a precipitate when mixed with antipneumococcus serum of the same type. Sputum of a rusty tenacious character is selected about the size of a bean, is washed in a saline and emulsified with 10 c. c. of bouillon and a half c. c. of the emulsion is injected into the peritoneum of a white mouse. With the remaining specimen direct smears are made and strained by the Gram method; Hiss capsule stain and for tubercle bacilli. This direct smear may reveal valuable information; for by the number of organisms, we can roughly determine the length of incubation of the Avery tube, while with the capsule stain if the smear discloses many pneumococci with large capsules the presence of pneumococcus mucosus (type 3) is suggested. 1 c. c. of the previous emulsion is added to the Avery

medium. This medium is prepared by meat infusion broth 0.3 0.5 acid to phenolphthalein, sterilized by the Arnold method twenty minutes on three successive days to avoid excessive heating. To each 100 c. c. of broth are added 5 c. c. sterile defibrinated blood. The fluid should contain 1% glucose and 5% blood and is put up in centrifuge tubes containing 4 c. c. total medium. This is frequently called the synthetic mouse as it possesses the property of so facilitating the growth of pneumococci that almost pure cultures can be obtained.

The Avery medium is incubated for five hours. At the end of this time blood agar plates are made in order to obtain the pneumococcus in pure culture. The tube containing the bacteria is centrifuged and the supernatant fluid is removed. One part is added to equal parts of the diagnostic sera-types I, II and III, while to the other part bile is added in proportion of 1-5*. Bile has the property of causing solution of only the pneumococci with liberation of the specific substances, thus a clear fluid if pneumococci alone is to be present. This clear fluid is added to equal parts of the diagnostic sera and a precipitate results, if the strain of bacteria present corresponds to the type of serum used in the test. This procedure can be accomplished in from 6 to 8 hours and has proven its worth by checking up quite accurately with the pure culture obtained from the mouse.

In group IV cases where the clinical findings persist and the case is severe we resort to lung punctures and type

*This first test is called the Agglutination Test and causes a clumping of the bacteria that forms a flocculent cloudy precipitate which gradually settles to the bottom of the test tube in from one-quarter to one half an hour

the organisms directly from the lung. Occasionally a type I organism is obtained, when only a type IV pneumococcus was isolated from the sputum and specific treatment can be instituted. Let us now return to the ward. A complete history and physical examination is made of the patient and the necessary medication ordered. A blood culture is made by removing 15 c. c. of blood. 10 c. c. of blood are added to 250 c. c. of bouillon. Daily notes and graphic charts showing the location and extent of the lesion are made. Special attention is given to the complications which may arise from tympanites, distention, and from infection of the ears, heart, meninges and pericardium. Where there is a suspicion of empyema, the chest should be explored, as the signs on physical examination are frequently misleading. In the type I cases the pneumococcus serum is given 100 c. c. every 8 to 12 hours. Before giving serum in large quantities intravenously, it must be determined whether the patient is sensitive to horse serum. This may be done by injecting a .02 c. c. of 1-10 dilution intradermally. If a positive reaction is evidenced within 10 to 20 minutes by a local hyperaemia and an urticarial wheal the patient must be carefully desensitized. This can be done by repeated small subcutaneous and later intravenous injection of anti-pneumococcus serum. If these precautions are observed and the therapeutic doses of serum are injected slowly there is no danger from anaphylactic reactions. In delirious cases that are desperately ill 250 c. c. of 20% glucose sol. in normal saline is given intravenously every 12 hours. The results have been encouraging but not conclusive. Other medication is given as required.

This laboratory and bedside work

may seem cumbersome and uncalled for but it gives these important results. Type I pneumococci are discovered in from 6 to 8 hours and the serum immediately given, thus bringing a mortality from 30% to below 7%. Blood cultures give an important index to the prognosis, for the analysis of a number of cases show us conclusively that we may consider the prognosis and if there are excessive numbers of colonies to 1 c. c. of blood.

During the month of September and including the month of October the epidemic of Influenza brought to the Base Hospital, Camp Jackson, S. C., over 8100 cases. The splendid work done by the nurses just in from civilian life won the admiration of all. It was frequently necessary for them to be commanded to leave the ward against their will when they were acutely ill from the epidemic. Several of them made the final sacrifice for their patients.

Under Major Herrick's skillful handling of the epidemic, all cases showing any acute respiratory involvement were transferred to the so-called pneumonia wards. In this way all such cases were put under careful observation and given the necessary medical attention both day and night. During the day each ward had its ward surgeon, and over each group of four or five wards, a consultant or supervisor saw the doubtful and critical cases. It was my privilege at the beginning of the epidemic to be relieved from duty on a pneumonia ward and assigned as night supervisor of all pneumonia wards. The assignment lasted throughout the epidemic, one month and a half. During the height of the epidemic there were 28 to 30 wards comprising 900 patients. The majority of the cases were acutely ill and some 50 to 75 in critical condition

each night. 1400 cases of pneumonia were admitted during the epidemic of whom 385 died. It is impossible to give you statistics or figures at this time but there were several impressions about the therapeutic side that may be of interest.

Clinically, the pneumonia could be divided into these general groups:

1st. Acutely toxic state-patient is usually found with rapid respiration, face flushed and somewhat cyanotic, cough persistent and at first unproductive. Pulse accelerated of increased volume and with a tendency to become dicrotic. The patient is anxious, extremely uncomfortable, often times with agonizing plural pains. He may be delirious with hallucinations and delusions of persecution. It is imperative that these cases be made comfortable. Otherwise they will tire themselves out with coughing and restlessness. Morphine every 6 hours is indicated or codeine every 4 hours. Poultices and expectorants are often of value. Tincture of digitalis may be begun on all acute cases during this period. Any standard preparation can be used that has previously shown its potency. The important point is to push it until results are obtained. Tr. of digitalis 1 to 2 c. c. every four hours up to 20 doses has not proved excessive. Out of 1,400 cases I saw only one case of partial heart block, one of diarrhea and some 8-10 of gastric disturbances. No detrimental results followed the medication. In comparing a series of cases treated with digitalis, and those which are not so managed, I was struck by the result, that with the digitalized series sudden collapse is less frequent.

2nd. The second stage of pneumonia can be described as the continued fever state. The respiration improves and the toxicity seems to be

less marked although the patient remains acutely ill. The pulse may become more rapid and the volume diminished. The cough changes to a copious productive type. During this period codeine relieves the restlessness. In this stage of the disease frequent examinations of the ears should be made and if otitis media develops incision and drainage is often necessary. Abdominal distention or urine retention may occur. Routine soap-sud enema every morning and medicated enemata when necessary as well as castor oil, Pituitrin 1 c. c. intramuscularly, the use of the rectal tube and turpentine stupes often give results.

3rd. Collapse seems to come in about 10% to 15% of the cases. The pulse becomes rapid, of small volume, and later imperceptible at the wrist. The respiration becomes shallow and frequently 40 to 60 per minute. The patient is very pale, lips somewhat cyanotic and a profuse diaphoresis may be present requiring changes of linen at frequent intervals. The chest revealed numerous rales and rronchi, varying from a musical to a bubbling character but all of a moist variety. The patient is in a critical condition and requires stimulation. The question of stimulation is largely a matter of experience and choice. We are able to observe medication used in different parts of the country as represented by the ward surgeons on the different wards. We found that there were a few drugs which could be depended upon to give definite results. Camphor with oil 1 c. c. every few hours hypodermically and whiskey one ounce every two hours is quite satisfactory. The most rapid effect can be obtained by adrenalin minims 10 hypodermically every half hour for six hours and caffeine Grs. 2, every 2 or

4 hours. With early oedema of the lungs, Atropine Grs. 1/75 to 1/150 every 2 or 4 hours is advantageous, Strophanthin may be given intramuscularly in broken doses. It should be used with great care or not at all in cases that have been previously digitalized. At the Base Hospital, Camp Jackson, S. C., there is used a proprietary product, Oubain supplied in ampoules of 5 c. c saline with Grs. 1/126 of the drug. A dose of 1/2 to 1 c. c. intramuscularly every 15 minutes until the desired results is obtained or until the 1/126 of a gr. has been given, has shown very favorable effects in a few cases.

Strychnine has almost no effect even in doses of grs. 1/20 every four hours except in cases of distention. The most important fact to remember is not to give up a case while he is still breathing and alive. I do not mean that all critical cases can be saved for I have seen as many as 15 to 17 cases die in one night but there is a certain small percentage which are well worth working for. Sometimes the most discouraging cases were the ones that responded best to the stimulation.

4th. Exhaustion may come from a few days to a few weeks following a severe case of pneumonia. A patient that has been going along nicely and apparently has passed through the crisis is found in a state of exhaustion. The temperature may be subnormal, pulse very slow and respiration feeble and shallow. Stimulation and forced feeding seem to give the best results. Hot applications, hot drinks with whiskey, Strychnine by mouth, and camphor with oil if necessary. These cases do quite well if they are carefully nursed.

Empyema occurs as the most common complication in a large number of pneumonia cases, with the excep-

tion of otitis media. There are two varieties. First the ordinary forms due to pneumococcus; second, the other, due to the streptococcus, in the the majority of instances, the hemolytic streptococcus. The first occurs as a complication of ordinary typical lobar pneumonia 10 to 14 days after the expected time of the crisis, at which time the exploration of the chest finds a thick creamy pus, containing pneumococci. Cases of this type are treated by thoracotomy and rib resection. According to the Carrel-Dakin treatment irrigations of Dakin's solution have been employed at frequent intervals, usually two to four hours apart. When Sodium hypochlorite is used with free and complete drainage the character of the pus changes quickly to a glary mucoid material and the offensive odor rapidly disappears. The number of bacteria in the discharge quickly falls and it has been possible to close the wound in from 10 to 15 days.

Streptococcus Empyema.

This type of empyema is more frequently met with in army than in civilian life. It is generally associated with acute bronchitis or bronch-pneumonia as complications of epidemics of measles or influenza. The presence of the exudate is exceedingly difficult to determine by ordinary physical examination and it frequently becomes necessary to resort to exploratory aspirations. At first this exudate is a thin cloudy amber color, or possibly blood tinged. Later it becomes gradually purulent. The most satisfactory results have been obtained by repeated thoracentesis. After the fluid becomes purulent and the cavity well walled off, a rib resection can be done and the Carrel-Dakin solution treatment instituted. Interesting work has been done along this line by the

Empyema Commission at Camp Lee. 140 cases of Hemolytic streptococcus empyema were studied and the above treatment has been endorsed by them. The nitrogen excretion was markedly increased during the early acute stages of a streptococcus infection. Emaciation and loss of strength were associated with augmented metabolism. This, however, was checked by raising the fuel value of the diet to a daily ration of from 3,000 to 3,500 calories.

The after effects of both influenza and pneumonia deserve a few words of consideration. There are three different systems that seem peculiarly susceptible to the toxins arising from influenza. The respiratory system represents the largest proportion, gastro-intestinal comes next in frequency and the nervous system may become involved when prolonged toxicity is found as in cases complicated by broncho-pneumonia. In the respiratory type the time of convalescence should not be controlled alone by the temperature. Not infrequently we find a patient with normal temperature for several days still showing numerous moist rales at the bases a sore throat and congested nasal and naso-laryngeal membrane. X-rays of the lungs show small areas of peripheral mottling not unlike miliary tuberculosis. This may persist for weeks or months after the patient has clinically recovered. Last year a series of some six hundred cases were observed for several months. It was during the epidemic of measles followed by broncho-pneumonia. They found that the lungs eventually cleared up although several of the patients were sent back to the hospital as suspected cases of tuberculosis.

Sometimes the onset and the majority of symptoms of influenza are gastro-intestinal. Loss of appetite, inde-

finite pains and vomiting may be the chief complaints. This type of case may have persistent symptoms for several weeks after recovering from the infection.

The mental and nervous manifestations of this disease can be roughly classified in the following manner: exhaustion psychosis, frank psychosis, and the neurosis group of neurasthenia, hysteria and psychasthenia. The nervous involvements include Bell's Palsy both single and double, brachial paralysis, multiple neuritis with or without pain, myasthenia, analgesia, hyperesthesia, and then comes a curious group involving the brain and spinal cord presenting syndromes simulating so closely such conditions as tabes, multiple sclerosis and myasthenia gravis that a negative diagnosis was only based on their uneventful recovery. It would be impossible to go into each one of these conditions in detail especially as the nervous manifestations when present are self-evident. However, the mental disturbances are important because of their occasional unfortunate tendency towards suicide. As the fever increases a mild delirium may come on and care should be taken to keep the patients covered and in bed. With the increase in toxicity the delirium becomes wild and delusions of persecution develop. These cases generally make an uneventful recovery as far as their mental condition is concerned. However, there are a few that develop a definite psychosis, the tendency towards which probably has been always present but in a latent condition until brought to the surface by the lowering of the threshold from the toxicity of this disease. Some others present the depression phase of maniac-depression insanity that lasted for several months

and many cases of dementia precox were seen.

5th. The laboratory department at Camp Jackson will in the near future have some very interesting findings upon this recent epidemic. I will not attempt to draw conclusions from the results as it might very easily lead to faulty and erroneous impressions. Their mass of information has forcibly impressed us with a complexity of the problem at hand.

Sputum cultures from a large number of the 8,000 cases show various types of organisms, especially the strain designated as type 4 pneumococcus, less often *B. influenzal* various types of streptococci; pneumococci and members of the Gram negative diplococcus group, such as the catarrhalis or *M. Flavus*. *Staphylococcus aureus* was frequently found later in the disease.

On account of the crowded condition of the morgue, it became possible to hold but few post mortem examinations. Consequently an attempt was made to learn more of the bacteriological infections of the lungs of the fatal cases by exploring the lungs post mortem with an ordinary chest exploring needle and syringe. Cultures were then made and in 312 cases the organism were secured in this way. The result shows the presence of 16 different micro-organisms the more frequent of which were *Staphylococcus aureus*, pneumococci types 1, 2, 3, 4, *B. influenza* and *Virdans* and meningococcus T. 10.

There were 42 different groups or combinations of organisms, 14 cases in which one organism alone was secured.

Whether *B. Influenza* is the underlying factor causing a clinical picture representing the old fashion grippe or whether some other micro-organism is responsible will be determined later

on. At any rate it is a toxic disease causing prostration, toxæmia and a general inflammation of the respiratory tract. The lowered resistance encourages secondary infection. The nasal or upper respiratory flora vary with the locality, climate, altitude, sanitary conditions in various parts of the country. Thus we would naturally expect at first glance rather contradictory results from the different laboratories.

Is it not logical to suppose that during an epidemic of this kind with the body resistance lowered, the respiratory tract inflamed, the discharge profuse and the cough persistent and frequently paroxysmal that many pneumonias and broncho-pneumonias are inspiratory infections. For this reason I have been trying out a system of prophylactic therapy for the upper respiratory tract. It is not an attempt at sterilization but simply to meliorate the inflammation, to check the secretions and lessen the coughing. The result should be diminished pneumonia and broncho-pneumonia. A large series of cases must be observed before any definite answer can be given.

The treatment is as follows:

1st. 12% Borated Vaseline with menthol, 2% sufficiently diluted with liquid alboline, to make it of soft butter-like consistency. If the mixture is put in hot water bath it becomes fluid and the syringes can be filled without difficulty.

2nd. An alboline spray to the throat made up with camphor and menthol are also used every four to six hours.

I do not doubt that there are other and better preparations for an inflamed mucous membrane but the above preparation seems the simplest and most easily applicable for ward work.

ANNUAL REPORT FIELD SECRETARY STATE BOARD HEALTH

By Mrs. Annie I. Rembert, Columbia, S. C.

Appropriations Given by Legislature 1918.

Infirmary	\$20,000
Completion of equipment new building	2,000
Silo Barn and Refrigerating Plant	5,000
Maintenance	15,000
Appropriation for the War Fund to be expended by Co-operating Committee Tuberculosis War Problem.....	5,000
Educational Pamphlets, to be Issued by State Board of Health to Public Schools....	1,000

The pamphlets issued by the State Board of Health are now ready for distribution and are being sent out with the recommendation and endorsement of the Superintendent of Education.

Co-Operating Committee on the Tuberculosis War Problem.

The above appropriation asked of the General Assembly of 1918 was given as requested. Five thousand dollars of this money was designated as the fund for the Co-operating Committee on the Tuberculosis War Problem. The items were voted upon by members of the committee, the majority report of proposed tuberculosis work authorizing program.

The object of this organization is to promote co-operation between the counties and the State of Health. There are one hundred and fifty members in the State. Among these members we have county superintendents of education, mayors of towns, county supervisors and prominent members of the Federated Clubs of the State.

These members are requested to co-operate with the local Red Cross relief committees and to assist State tuberculosis nurse in making her survey as complete as possible. They will also interview the members of their county delegations and present to them the proposed legislation for the coming year.

Employment of Colored Health Worker.

This idea of co-operation extends to the negro, our object being to encourage the most intelligent and progressive among them to take the lead in providing for the needs of the tuberculous negroes of the State. To this end a competent health worker (colored) was employed to organize co-operating committees among the negroes in the counties of the State, for the purpose of stimulating an interest in the establishment of the tuberculosis camps.

The efforts of Mrs. Rebecca H. Walton have more than justified this extension of our tuberculosis work, looking towards the care and treatment of the tubercular negro. With the exception of the colored ward in the Sumter County Camp, no provision whatsoever has been made up to the present time to meet this condition which unfortunately is very prevalent among the negroes.

We have always understood that some steps had to be taken in order that the whole State might be protected. Our indifference to this branch of the work, and our disregard for the consequences have been a positive handicap even among our work among the white people in the past.

Twenty-seven counties have been organized since March 1st, and the colored people all over the State are deeply interested in promoting the

plan for district hospitals for tuberculous members of their race. As an indication of their sentiment along these lines, I submit to you a list of sites which have been offered to the State Board of Health for this purpose.

Land offered for sanatorium sites for negro sanatoriums:

Five acres, Eastover, Richland County, 1917, Miss Julia Clarkson (white) 1918.

Ten acres near Bennettsville, Marlboro County, E. J. Sawyer, L. L. D., (negro.)

Land offered, 50 acres Edgefield County, if used for district sanatorium or 10 acres for county sanatorium, R. H. Nicholson, president of Bettis Academy, Trenton, S. C.

Land offered, five acres land, Berkeley County and \$500.00, Rev. D. J. Jenkins, Charleston, (negro.)

Five acres near Marion, Marion County, Butler Gènero, (negro.)

Land near Orangeburg, number of acres not stated and \$1,000, Mrs. Marion Birnie Wilkinson, president Colored Women's Federated Club, Orangeburg.

Land adjoining Caucasian sanatorium site, Greenville.

Land offered, sanatorium to be given by a white citizen of Greenville on condition negroes raise their amount pledged this year.

Relief Work Among Soldiers And Rejected Men. Employment of State Tuberculosis Nurse.

We have put forth a special effort to meet the needs of our men of fighting age both in and out of the army. In April I was invited to address the State Federation at their annual meeting in Aiken. At this meeting it was decided that the club women give a library to the tuberculosis ward at

Camp Jackson. The response has been gratifying and I am glad to report that a library of about four hundred books has been installed in the tuberculosis ward for the use of those men, who because of their disease are cut off from the general use of books at the circulating library of the camp.

We have given temporary care at the sanatorium to three discharged soldiers and were able also to provide for the wives of two soldiers, the latter paying for their expenses from their allotment furnished by the government.

In May I attended a called meeting of the heads of the Tuberculosis Departments of the Southern States at Atlanta; the object of this conference being the locating and care of rejected men in their homes and at sanatoria. As a result of this conference, we put in a full time tuberculosis nurse who is engaged to go into the homes of all cases of tubercular rejects from draft boards and camps, and report conditions to this office. We have gotten out a blank which she uses for this purpose, these records will be kept in the office of the State Board of Health where filing system has been installed.

When institutional care is necessary for these men, we will make arrangement for them either at South Carolina Sanatorium, or in county camps in the vicinity in which they live.

The educational value of such a survey cannot be estimated, and we hope to employ one or more of these nurses to give their entire time to the visiting of homes in counties where a nurse is not employed.

It will facilitate our work, in many instances, to have our application blanks investigated as it is hard sometimes to ascertain the financial condition of patient. It is our desire to assist those who are not able to pay

for treatment, but our policy is to have the family bear all or part of expense, unless they are positively unable to do so. We can call upon our visiting nurse to furnish this information, and we can also keep in touch with members of the family and do follow up work when patient returns to his home.

As a war measure, only the homes of reported men are being visited, but as time goes on and our list diminishes somewhat she can go into a more general survey of tuberculosis conditions in the State. She is keeping in touch with the Red Cross Home Service Relief committees, and she reports that they are giving her valuable aid in her work. By this co-ordination with the Red Cross workers, we can avoid any overlapping which might otherwise occur.

Program of Years' Work

I hereby submit the years' program for Co-operating Committee on the Tuberculosis War Problem. On account of the recent epidemic, slight changes were made in this program. These items have been voted upon by the members of the Co-operating Committee on the Tuberculosis War Problem, and have been endorsed by Dr. Jas. A. Hayne, treasurer of the organization.

Budget of fund to be used by the Co-operating Committee on the Tuberculosis War Problem, Jas. A. Hayne, treasurer:

Traveling expenses of the secretary of the Co-Operating Committee on the Tuberculosis War Problem; March 1, to January 1.....	\$ 200.00
Stationery, stamps and distribution of literature.....	300.00
Visiting nurses for discharged and rejected men, salary,	

October, November and December, \$300; traveling expenses, \$225	525.00
Relief to discharged soldiers, rejected men and civilians, white and colored, March 1, to January 1	1,135 00
Appropriation to first district hospital for negroes as demonstration camp	1,000.00
Appropriation to T. B. Camp in Greenville provided the colored ward is built this year	500.00
Salary of the State health worker from March 1, to January 1	500.00
Traveling expenses of State Health worker from March 1st to January 1st	465.00
Traveling expenses of assistant colored worker from October 1 to January 1...	150.00

Establishment of Soup Kitchen for the Colored People

On account of the prevalence of the Spanish influenza, which epidemic reached its climax between the following dates—October 7th and November 14th—my work along tuberculosis lines was entirely discontinued, and I devoted my energies during that period of time towards the establishment of a soup kitchen for the colored people of Columbia. I was ably assisted in this work by two competent colored women in charge of the Phyllis Wheatley Club who offered their rooms and their services for the period of the epidemic. This club is under the War Work Council of the National Board of the Y. W. C. A., and War Camp Community Service and is the natural center for such an undertaking. Too much cannot be said of the faithful work done by the two women in charge of the club. They gave their

entire time to the operation of the soup kitchen, and our work could not have been a success without their aid.

Rev. J. A. White, chairman of the executive board of the colored Red Cross, requested that this work be undertaken by his committee, and he was put in charge of the automobile service and of the volunteer soup distributors. The equipment was furnished by the Red Cross and will be used for any emergency which may arise in the future. About forty homes were visited daily, the names being furnished by the Associated Charities. This organization was the clearing house for all city cases.

This activity is a new departure for the negro and the work done during the epidemic is to be commended. It is to be hoped that a permanent relief committee will be organized in the colored Red Cross, and that the negroes will feel their responsibility for their own race in time of sickness and distress. The negroes maintained all the expenses of the soup kitchen and furnished automobiles for the delivery of the soup.

Registration of Volunteer Colored Nurses During Epidemic.

The demand for volunteer workers and nurses being so great during the period of epidemic, I undertook the registration of the colored volunteers, giving their names to the office of the U. S. Public Health Service influenza control measures. Some of these negro women had taken the "home care of the sick" classes under the Red Cross, while others were practical nurses who had gained experience through bedside nursing in their own communities. Nine of them worked with the organization referred to, and the reports show that they did their work faithfully and well.

Report on Sanatorium—Free Beds From Counties.

We were able to secure free beds in the following counties this year:

County appropriations for tuberculosis patients:

Abbeville	\$ 365.00
Aiken	180.00
Charleston	365.00
Chesterfield	90.00
Clarendon	365.00
Colleton	365.00
Darlington	90.00
Edgefield (County Board of Commissioners)	90.00
Fairfield (County Board of Commissioners)	365.00
Florence	365.00
Georgetown	182.50
Greenwood	183.00
Hampton	182.00
Laurens	365.00
Newberry	365.00
Oconee	365.00
Spartanburg	365.00
Union	185.00

Total.....\$4,833.00

Four of these counties, Darlington, Hampton, Laurens and Oconee sent no applicant during the year. The money could not be used for any other patient.

It appears that the necessity for caring for the consumptives is more clearly brought out in some parts of our State than in other parts.

We will put on an intensive campaign at once in those counties failing to take advantage of funds available for this purpose, and it is our desire that all delegations insert in their county supply bill an item for the care and treatment for the tuberculosis.

It has been my duty to act upon all county applications for free beds. The bills being paid to Jas. A. Hayne, treasurer.

Committee on Admissions.

In June a committee on admissions was appointed by the State Board of Health to act upon applications sent to this office. This committee consists of Dr. Jas. A. Hayne, treasurer, Dr. William Lester and myself. I have acted in the capacity of clerk and have looked into the financial condition of patients with a view toward giving from our charity fund of the Co-operating Committee when such assistance was necessary. As indicated in the budget, the sum of \$1,135.00 was given for this purpose. Very few patients have been taken entirely free. Some have contributed twenty dollars, some ten dollars others as little as five dollars for their up-keep.

I am glad to report that no person has been denied at the Sanatorium on account of the lack of funds. It has been possible through the county fund and our charity fund to meet the needs of those who have called upon us.

ANNUAL REPORT OF HEALTH OFFICER GREENVILLE COUNTY

By S. J. Taylor, M. D., Greenville, S. C.

To the Secretary of the State Board of Health, Columbia, S. C. Sir:

I have the honor to herewith hand you my annual report as health officer of Greenville County for the year 1918.

The military camp in our county has given us much more work to perform and introduced at least one contagious disease that we have not previously had to contend with: cerebro spinal meningitis. There were sixteen cases during the months of December 1917, to April, 1918, inclusive, and two cases in November, 1918.

The spread of this disease has been successfully combatted by a rigid

quarantine, all contacts examined, and carriers treated. In this we were materially assisted by the Red Cross.

Influenza.—This disease which has made its periodical appearance in this country under various names, being brought in from some European country, made its appearance in Greenville county this fall. In preventing the spread and ravages of this disease, the health officials at large seem to have met with rather an ignominious defeat and the disease has taken its toll in anxiety, suffering, financial loss and death in full measure, and retarded to no small extent the educational development of our school children. Why is this disease permitted to be brought into our country, with a quarantine station at every port? The disease has caused a great divergence of opinion among health workers, many taking the view that the fire is started and nothing can be done to stop it or control it, so let it burn itself out. If this be our view then we must admit that our little tale of communicable diseases being preventable diseases is false.

Why quarantine for smallpox with a preventive treatment; typhoid the same, diphtheria with a specific in treatment; having had scarlet fever gives us immunity, measles partial immunity. So lets have it and be done with it.

I place myself on record as believing that the disease can in a great measure be controlled by a judicious quarantine and if through such measures reduce five per cent. or even one per cent. of deaths, we will have done a wonderful amount of good.

There has been quite a reduction in the number of typhoid fever cases this year. This being due possibly to two causes; first, prophylactic treatment, and second, better sanitation.

Searlet fever and measles likewise have been less prevalent in the passed year. This in some measure is due to the people more fully understanding, that it is necessary for those suffering with the disease must be more rigidly isolated from the well, there being but one ease, as a rule, developing in a family.

Due to the camp having caused an increased amount of other work I have not been able to make as many medical examinations of school children as in the past.

Have made 800 examinations; of this number there were 276 suffering with chronic tonsilitis, 75 acute colds, 15 ringworm, 97 pediculosis, 30 defective eye sight, 23 defective hearing 325, defective teeth, 75 malnutrition, 500 were successfully vaccinated against smallpox.

Have given 763 persons prophylactic treatment for typhoid fever. Vaccinated 2,162 school children against smallpox.

Sanitation.—I have made sanitary inspection of all the mills, of the county jail and depots, 1,172 private premises, have had 250 sanitary privies installed in the suburbs of the city of Greenville, been blocked in a great measure by the Red Cross in this work, as they had me notify the people that they would build the concrete vault type if the people would furnish the material, then after this was done they stopped all work along this line.

Was called in consultation 75 times, treated 19 cases cerebro spinal meningitis with family physician in attendance, three deaths in this number.

The following number of contagious and infectious diseases were reported by the doctors in the county for the past year:

Diphtheria	23
Chicken pox	7

Dysentery	5
Malaria	9
Measles	82
Meningitis (cerebro-spinal)	16
Mumps	23
Pneumonia	15
Pneumonia	15
Pellagra	4
Para-typhoid	2
Searlet fever	10
Smallpox	17
Typhoid	60
Tuberculosis	2
Whooping cough	23

This number we know is not absolutely corerct as the doctor's report is not full and complete, and in many mild cases of measles and searlet fever, there is no doctor in attendance.

This Mr. Seceretary, is my annual report for the year beginning December 1st, 1917, and ending December 1st, 1918.

HEAT IN THE TREATMENT OF
CANCER OF THE UTERUS.

Operable and Inoperable.

By W. W. Fennell, M. D., Rock Hill, S. C.

Mr. President and Gentlemen of the
South Carolina Medical Association:

MY reason for offering a paper on this subject is because I consider it one of the most important surgical subjects we have before us today, and unless radical measures are taken early, death is a certainty.

Many theories have been advanced as to the cause of cancer, but as yet nothing definite has been settled. However, it is a well known fact, that cancer cells have a very low heat resis-

(Read before the South Carolina Medical Association Aiken, S. C., April 19, 1918.)

tance, much more so than that of normal tissue, not being able to stand a temperature of more than 112 degrees Fahrenheit for a longer period than ten minutes, while the normal cells have been grafted after having been subjected to a temperature of 140 to 150°. And with my experience with heat in the treatment of cancer, I consider it the most effective method of treatment when properly applied, not only in cancer of the uterus, but in all types of cancer.

I cannot help but think that most of the unsatisfactory results which have been reported from the use of the Percy method have been due to the improper application.

It is a very difficult matter to regulate an electrically heated iron, and one of the greatest troubles is getting the cautery too hot, and instead of heating the tissues, you have produced a local burn. And what has happened? You have produced a charred core around the tip of the cautery, which is acting as an insulator, preventing the radiation of heat out into the uterus, where, if the iron is kept at a temperature below the burning point, you will heat the tissues much more rapidly, and your results much more satisfactory.

Dr. Percy has shown that by placing a cautery in a piece of beefsteak and kept at a low temperature, the thermometer showed a quicker and wider radiation than when the iron was allowed to get hot enough to char the tissues. For this reason the best results have not been obtained.

I think it was Dr. Percy who suggested a very simple method of regulating the cautery, by simply placing a bit of cotton on the staff of the iron, just where the tip is screwed in, and when you notice the cotton is begin-

ning to scorch or burn, the iron is getting too hot and the rheostate should be turned back a little.

For many years, even before Dr. Percy published his first paper on heat in the treatment of cancer, it was a well known fact that heat was beneficial in the treatment of cancer, by arresting the hemorrhage and checking the foul odor and discharges, thereby lessening the absorption of toxins and it is marvelous to note how rapidly patients improve under this treatment.

In the treatment of cancer of the uterus, we have only two classes of cases to deal with—the operable and inoperable. The so-called border line cases belong to either one or the other. In other words, we are not sure as to which class they should be placed. However, I am convinced, that by the proper application of heat many of the border line cases can be changed from the inoperable column to the operable side of the ledger.

In the inoperable case, it is absolutely essential that the abdomen be opened for the safe and proper application of heat, for in case the abdomen is not opened there would be great danger in forcing the cautery tip through the uterus into the abdominal cavity on account of the diseased condition. Again, it would be impossible to determine just when the uterus had been thoroughly heated. Your assistant should hold the uterus in his hand, acting not only as your assistant but your thermometer. The heat should be kept up until it is uncomfortable to his gloved hand. Before this is done, however, I have the ureteral catheters inserted into both ureters, well up to the kidneys, for two reasons—first, in ligating the internal iliaes which should always be done, as suggested by Dawbarn in the

starvation treatment of cancer of the tongue.

By doing this, you can do your ligations much easier, quicker, and with less danger of injury to the uterus. Again, in removing the ovaries and tubes, I can go a little further out with the catheters as a guide, and with this precaution I am able to rest more comfortable the night afterwards.

In the inoperable cases, the uterus is not removed, but left in for applying heat again, if you think it advisable. I have a case now in the hospital who has just had her third heating. When this case came to the hospital she was unable to walk, from loss of blood. Since her first treatment about six weeks ago, she has been able to make a thirty-five mile trip to her home on a visit, and back again for another treatment. This she did without an attendant. This is not an operable case.

Dr. Will Mayo, in a paper published in "The Journal," February 1913, pointed out that he had autogenous grafting of cancer cells when he used a cutting instrument for making his incisions in cancer cases, even in preliminary colostomies. But since he has substituted the cautery instead, he has not had a single case of recurrence from grafting.

The old cancer quack who was afraid to cut, but used different kinds of caustics in the treatment of Epitheliomas got better results than the doctor who used the cutting instruments, and unfortunately for the doctor, one cancer cell was sufficient for a recurrence on the cut surface.

So, in the treatment of the operable cases of cancer of the uterus, it is wise to make a preliminary application of the hot iron, practically the same as in the inoperable ones. I have some cases where I made as many as

two and three applications before doing a complete hysterectomy. The operation is done in the usual way from above, except the vagina is cut through with the cautery. I take two large clamps ordinarily used for clamping the stump in nephrectomies, and after everything had been tied off down to the vagina, these clamps are placed on each side well below the cervix and the vagina cut through with the electric cautery, instead of with the scissors or knife. After their removal a snugly fitting gauze drain is put in, not so much for drainage but to prevent the possibility of a knuckle of gut slipping through. The abdomen is then closed, in the usual manner.

Conclusions

Cancer cells have a much lower heat resistance than that of normal cells.

Low temperatures and slow application.

Starvation by cutting off the blood supply.

Use **Cautery Incision** in place of cutting instruments to prevent grafting.

Heat not only in the inoperable, but in conjunction with the operable cases.

Discussion

Dr. Geo. H. Bunch, Columbia, S. C.

Mr. President, I was very much interested in hearing Dr. Fennell's discussion of this subject, and also his results from the use of the Percy cautery—the treatment of inoperable cases. The theory that the cancer cell is less resistant to heat than the somatic cell is beautiful, if it is a fact. Personally I have always doubted its truthfulness. We cannot prove that cancer cells are killed with 10 degrees less heat than body cells. I believe the Percy cautery is a fad and I do

not believe experience is going to justify its usefulness.

Not being enthusiastic about the Percy cautery I did not buy one myself but waited until Dr. Guerry bought one and used his several times on inoperable uterine cancer, according to directions given by Dr. Percy in his original article on the cautery. I could not convince myself from my personal experience and observation of any good from its use. When the vagina is filled with a large cauliflower mass of course from the cervix there is bleeding and a profuse foul discharge. The patient is anemic and emaciated. One can hardly stay in the room with her, because of the smell. We burn such a malignant cervix deep with red hot cautery irons. The bleeding stops; the discharge ceases; the patient begins to eat, picks up, regains her strength, weight and blood. Many of these cases, otherwise inoperable, become fair risks for radical curative hysterectomy to be undertaken, usually after about two weeks from the canterization. By stopping the bleeding, the absorption and the odor the hopeless cases live longer and are more comfortable because of the canterization.

Dr. A. E. Baker, Charleston:

The doctor has brought forth the working knowledge and scientific application of this heat. For the last two years I have been using it and my experience has been similar to his. Especially to the woman with inoperable cancer it is a boon, for it gives that woman hope, in proper hands.

Dr. LeGrand Guerry, Columbia, S. C.:

Just a word in regard to the cautery and heat. Of all the dark chapters in surgery this question of cancer is the

darkest, and we have not, after all, gotten so very far along in the management of cancer, particularly cancer of the cervix. I would be entirely satisfied never to see another case of cancer of the cervix as long as I live, because, apparently it doesn't make very much difference what you do with the cancer of the cervix, the recurrence is very great. When the abdomen is opened and you pass your hand along that iliac vessel and find definitely infiltrated cancer glands above the bifurcation of the vessel, it does not matter what you do with that patient, because the patient has gotten out of the operative field. The most radical thing we can do is probably the best thing, and it is also the biggest risk. A man who is doing a radical operation for cancer of the cervix is going to have recurrences, the extent of which will depend upon how radical the operation is.

This question of heat. Here is a complete illustration: I have five cases of cancer of the cervix, extending over a considerable number of years, that I want to refer to, with a big cauliflower growth of the cervix, with the uterus pretty firmly fixed. I would say those cases were inoperable. Better still is the soldering iron, which you can get for 15c, the white handled ones; the black ones two for a quarter. If you will take such a cautery as that and burn that old growth away; take an hour to do it, if necessary—I have had five of those people get so much better after the primary operation that they came back and we subsequently did a complete hysterectomy on them, with the result that three of those people are alive after operation. One of them we had to deliberately cut the ureter off on the right side and transplant it into the bladder, from the heat. You can get

the result from the Percy cautery. It is the heat that does the thing. I believe really you can take as simple a thing as the old cautery iron and do practically with it what you would do with the Percy cautery, because it is a question of applying the heat; not a high degree of heat, but keep at it and keep burning. In an occasional case of this sort you think the case inoperable—it is not always a cancerous infiltration; some cancerous infiltration, but that will clear up under this cautery, and you will be able to arrest an extremely interesting group that are practically hopeless. I believe you can take the ordinary soldering iron and do practically the same thing as with the Percy cautery.

Question: What causes the reduction?

We have had beautifully illustrated here the treatment, that it is controlled by heat in a good many instances, which Dr. Guerry bears out in his discussion. I want some one to turn some light upon the subject so that we will understand better what we are doing in the practice of medicine hereafter. If you can control cancer by heat, which is a destruction of the cell tissue, and, in fact, the development of cancer must be the misplacement of cell and the proliferation of it, and if you can destroy that by heat why cannot you control it by heat? If we had the electric current applied in a good many instances, we might control it without a suture.

Dr. Geo. T. Tyler, Greenville:

I would like to ask the Doctor, in closing, if he has seen the reports from the New York hospital. In the most rigid technic described by Dr. Percy

the patients both died, they had a metastasis of the liver and a thrombosis, and I hesitate to suggest that it will do every thing that we say it will. We should handle the Percy cautery with much caution, because these two cases have been reported, and there must be other disastrous effects, even from the use in competent hands.

Dr. Fennell closes:

In regard to Dr. Guerry's soldering iron, that reminds me of a boy going to bed at night putting a hot water bottle to his feet and expecting it to stay hot all night. You will have to change that little iron every few minutes or it will get cold.

I know there have been bad reports, but I have not had a single case of ulcer of the stomach, I think, as Dr. Guerry told me this morning he had heard of. I can't say that I have heard of any bad ulcers at all.

I do believe a man should use a preliminary amount of heat in a case of cancer of the cervix before operation. Dr. Guerry must confess that we have inoperable cases of cancer of the cervix, and I do believe it would be much safer to use this cautery from one-half to three-quarters of an hour. I must say I think they get in too big a hurry at the Hopkins in applying this heat. I had Dr. Simpson look me up a little literature on epithelioma of the face, and he found, among other things, the applying of a continuous stream of hot water at various times for a week to be an absolute cure of epithelioma, without destroying any of the healthy tissue.

At the Mayo clinic they say they have examined cells time after time and have failed to find any cancer that had had it before.

DIPHTHERIA OF THE FAUCES, LARYNX, TRACHEA AND BRONCHI.

By E. W. Carpenter, M. D., Greenville, S. C.

ON Octoebr 10th, 1918, I was called to see Hattie Hall, age five years, who was suffering with a pronounced dyspnoea. The attending physician had treated her through an attack of influenza and pneumonia, the illness being of two weeks duration.

S. P. Chest distended and tympanitic, tracheal tug and epigastric recession on inspiration, expiration stridulous and more difficult than inspiration. Fauces and pharynx filled with a very thick membrane. Exposure of the larynx revealed an enormously thickened epiglottis covered with membrane and a general extension of the membrane over the larynx and into the trachea.

I advised against intubation because I thought that a tube would not reach below the membrane, which I felt confident was in the trachea and that some loose portions were acting like a valve obstructing expiration and thus accounting for the great distention and tympany of the whole chest, I yielded to the temptation to intubate. A tube was inserted without difficulty but gave no relief. I expressed the opinion that tracheotomy would also prove unavailing, but proceeded to do a bedside tracheotomy without any anaesthetic. After opening the trachea wide, respiration was in no wise improved. A bronchoscope was introduced and the lumen of the whole trachea and both main bronchi were seen to be almost obliterated by a

neerotic membrane. After withdrawing the scope I began fishing with a slender bronshoscopic forcep, this was rewarded by the withdrawal of numerous fragments of membrane, one piece a east of the trachea being two inches long. both main bronchi were cleaned out in like manner and respiration became quiet and full. Thirty thousand units of serum were given but the child was too septic and died in about ten hours.

Remarks: It is only very recently that pulmonary diphtheria has been recognized and still more recent that any attempt has been made to remove tracheal or bronchial membrane. I believe that the onset of this case was pulmonary for the attending physician examined the throat frequently during the child's illness and is positive that no membrane was visible the day before I saw the case. The membrane in the trachea was neerotic at my investigation of the case which means that it was several days old, the appearance of the membrane in the pharynx was after a diagnosis of broncho-pneumonia had been made by the attending physician. I strongly suspect that a correct diagnosis would have been tracheo-bronchial-diphtheria.

In this case as in many other cases of obscure obstruction to respiration the doctor waited too long before getting assistance. We should never wait for impending death to introduce an intubation tube, a bronchoscope or do a tracheotomy. Cases of obscure dyspnoea always demands direct visual investigation. My reasons for not using the scope in this case before opening the trachea was because the tracheal membrane was becoming detached and I feared rolling it up and packing the entire lumen of the trachea.

A B S T R A C T S

U. S. DEPARTMENT OF LABOR INFORMATION AND EDUCATION SERVISE WASHINGTON.

The need of public action to place clean milk within the reach of every family having little children is emphasized in this report of the New Orleans milk situation, just issued by the Children's Bureau, U. S. Department of Labor. This is the third study made under the Bureau's auspices of the use of milk in families where there are small children. The studies all indicate that children are not getting as much milk to drink as they need for healthful development; but in New Orleans, where the most recent study was made, children are found to be getting less milk to drink than the children of Baltimore, Maryland, and Washington, D. C., the other two cities studied. Seventy per cent of the children under eight who were not breast-fed were getting no fresh milk at all to drink. In Baltimore 66% and in Washington 45% of the children under eight and not breast-fed were getting no milk to drink, although the Children's Bureau points out that a child under eight should drink at least three cups (a pint and a half- of milk a day.

In New Orleans only 20 of the 413 children from 2 to 7 years old included in the study were drinking as much as three cups of fresh milk a day.

While the New Orleans figures show that the children from 2 to 7 years old suffer most from lack of milk to drink, it is also to be noted that only 63% of the babies under two who are not

nursed by their mothers are given milk to drink, leaving more than a third of these little children without fresh milk.

The situation, says the report, gives cause for grave concern because the children are not only being deprived of "the best and most nourishing food for normal development" but they are being given injurious substitutes in its stead. Of 338 children 7 years old or younger who are not breast fed and are getting no fresh milk to drink, 245 are given tea or coffee in place of it. "Milk is not merely a pleasant drink," said a Children's Bureau expert recently, "it is a food, and really a solid food. Americans are a milk fed race whose health will seriously deteriorate if the use of dairy products is given up."

The 211 families studied form only a small proportion of those in New Orleans having little children, but they are considered representatives. Most of the parents were of native birth; in 17 families they were foreign born, and 5 were negro. Although definite figures regarding income were not secured, the families are of about the same economic status as those included in the recent Washington study, where more than three-fourths of the families were living on \$20 a week or less.

Report issued by the Bureau of Labor Statistics show that the price of milk in the United States generally has increased 63% in the last 5 years. According to the Bureau of Markets of the Department of Agriculture, milk now retails for 16c in New Orleans. In several places, notably

Shreveport, La., Nashville, Tenn., and Tampa, Fla., it is as high as 20c. a quart. The point is made by the Children's Bureau that no matter what the price of milk it is still a cheap food, because it contains all the elements essential to growth.

Fifty-three per cent of the total milk purchased in New Orleans is neither pasteurized nor inspected, and the report emphasizes the need of inspection for the whole supply.

THE CONTRIBUTION OF HOLIDAYS TO NATIONAL VIGOR

The following are abstracts from editorials published in *The Journal of the American Medical Association* for March 1, 1919:

The revolutionary changes that the necessities of the war have injected into our national habits and conventional practices have already become the subject of much speculation with respect to their future states. One often hears the query: "Shall we ever return to our former ways." Particularly true is this in relation to the educational system, notably among the higher institutions of learning, which have responded in a most extraordinary manner to the nation's call for young men trained intensively in special ways to meet war-time emergencies. There has arisen a concentration of effort and a speeding up of schedules utterly unprecedented in the history of such establishments.

We should not be understood to imply that the outcome of this new way of conducting the business of education necessarily represents a beneficent reform. Undertaken to meet an emergency, it has demonstrated the capacity of our institutions to undergo rapid changes and adjustments of plan and policy. Even before any

critical evaluation of the results achieved and the possible advantages gained can be attempted, we hear the prophet declaring that this country shall never again revive the slow and easy methods of the past. The catchword "efficiency" is made to work overtime as the keynote of the expected performances of the future. We are warned that the mistakes of the past must not be repeated; that concentration of attention and conservation of the precious days and years are to become standard aims in the reconstruction period, alike in the world of education and in the domain of commerce.

More than one who have observed the actual working out of the new "militarized" procedures in practice have seriously asked themselves whether in the long run such war-time measures can secure peace-time benefactions. The fact that every hour of the day is utilized does not guarantee that it is most advantageously employed. There is such a thing as intellectual indigestion resulting from inordinate concentration. The efficiency of a mechanical or automatic performance can doubtless be increased in large measure by persistently continued practice; on the other hand, there are more distinctly intellectual processes which become impaired unless a reasonable period for reflection and mental recuperation is allowed.

Let us hesitate, therefore, lest we adopt a machine-like scheme too rashly as the basis for the further development of American higher education. The physician has a special concern in the threatened abolition of the institution of holidays. To him who watches the mode of life of his fellow citizens, the beneficence of an occasional holiday has not escaped notice. It need not be debated whether

there has been inordinate waste of time in the past; whether the life of many of our citizens, young and old, has not been extravagant in authorized idleness. The institution of suitable holiday periods is for the most part more than likely to make for good. "The right use of a holiday is one of the sovereign secrets in the practice of the noble art of keeping alive." Let us bear this in mind in the discussion of the projects of reconstruction, frankly admitting that leisure is valuable in the long run only if it improves the quality of work. A change of work may become a holiday in essence. The best holiday is not one spent in languid idleness but one that contains the largest amount of new experience. The physician needs such holidays; and in selecting their routine he will do well to observe such holiday experts as the naturalist, the traveler and the historian, rather than the golfer. A holiday, said a capable observer, is not an end in itself, but a means to a general improvement of the working life. The test of whether a holiday has or has not been well used, he added, is the supplement of zest and vigor that it contributes to our proper labors. —*Jour. A. M. A.*, March 1st, 1919.

MEDICAL CO-OPERATION IN THE SELECTIVE SERVICE SYSTEM

The second report of the Provost Marshal-General to the Secretary of War covering the operations of the selective service system to Dec. 20, 1918, has just been made available. The interest physicians have taken in the work, and the service they have rendered in the various boards connected with the selective service system, gave assurance that much in this report would concern the medical pro-

fession. This prophecy is fulfilled. A few instances: Medicine is credited with supplying 4,246 of the 13,564 members of the local boards (31.3 per cent.); in addition, there were established 155 district boards on each of which there was at least one physician, and 1,319 medical advisory boards with a personnel of 9,577. The organized medical profession will appreciate the following statement:

At this point a tribute is due to the American Medical Association. From this association came the suggestion for medical advisory boards and cordial assistance in their selection. The *Journal of the American Medical Association*, with a circulation of 66,000 copies, has been a valuable medium of information between this office and the medical men who discharged the duties of the profession to the government through the draft. The medical profession has responded and served in a devoted manner that has received universally favorable comment. It is gratifying to note the part which the Association has taken in thus assisting to raise our great army, as well as its valuable contribution to the war generally.—*Jour. A. M. A.*, March 1, 1919.

THE ATLANTIC CITY SESSION

Announcement of Personnel of the Local Committee on Arrangements

The following Local Committee on Arrangements for the Seventy-First Annual Session of the American Medical Association to be held in Atlantic City, June 9-13, has been announced: Emory Marvel, chairman; Henry T. Harvey, secretary; Edwin H. Harvey, treasurer.

Chairman of Sub-committees

Finance.....	W. Blair Stewart
Entertainment....	C. Coulter Charlton
Section Entertainment	Samuel Barbash
Hotels	David B. Allman
Halls and Meeting Places.....	W. J. Carrington
Section Meetings.....	Byron G. Davis
Program.....	Clarence L. Andrews
Printing.....	Joseph Poland
Badges	William W. Fox
Scientific Exhibit	Samuel Stern
Registration.....	David Berner
Information.....	Milton S. Ireland
Alumni Entertainments..	Worth Clark
Post Office and Telephones.....	D. Ward Scanlan
Commerical Exhibit..	Isaac E. Leonard
Golf.....	Walter Pender Conaway
Women Physicians...	Clara K. Bartlett
Ladies' Committee	Mrs. Gurney Williams

—Jour. A. M. A., March 1, 1919.

The following are abstracts of articles in the issue of The Journal, March 1, 1919:

WOUNDS OF THE FACE

V. H. Kazanjian, B. E. F., France (Journal A. M. A., March 1, 1919), remarks that there has always been a considerable variety of opinion as to the proper time to suture wounds of the face; some surgeons favoring early suturing, and others seeing disadvantages in it from possible suppuration and scarring. Critical examination of the opposing views points out that both methods should be employed to secure a minimum amount of facial disfigurement, according to the case, its location, involvement of adjacent structures, etc. Vascularity of the facial tissues promotes early healing, but this advantage is partly offset by

the communication with the oral and nasal cavities and the comminution of the bones. Free excision of the soft tissues that can be done in wounds elsewhere is impracticable in the face. Primary suturing of facial wounds has been frequently done at casualty clearing stations with unsatisfactory results. Aside from the avoidance of deformity, fatal complications must be considered and drainage established and function restored. If the stitches fail the progress of the patient has been retarded, and if they hold the deformity and suppuration are likely to be made worse. In certain kinds of wounds, however, early suturing is possible. Where there is no loss of soft tissue or bone injury or communication with cavities the wounds can in most cases be closed. The lips and nose being so soft and weakly supported, deformity may result if early suturing is not done, other conditions being favorable. The individual, however, may be harmed in other ways besides causing deformity. The need of avoiding a general anesthetic cannot be over emphasized in gunshot wounds of the face. In Kazanjian's experience, a high percentage of deaths from bronchopneumonia have given a history of a general anesthetic being used. Only local anesthetics should be used when suturing is attempted, and the injured parts are so often reduced in sensitiveness that anesthesia is gained by small amounts of procain. In early secondary suturing the inflammation and edema should be reduced as soon as possible by fomentations, etc.; the oral cavity and wound be freely syringed with antiseptic solutions, and it is often advisable to leave a small portion open for continuing drainage. Wounds involving bone injury always suppurate freely and there is marked inflamma-

tion. Early treatment is directed to the reduction of sepsis and swelling. The irritating and useless fragments of bone or teeth are removed, and splints supplied where needed, both for supporting bone structures, and, in some cases, similar appliances for the soft parts. Suturing is not attempted until the inflammation has disappeared, and the wound not always completely closed, as suppuration may continue into the oral cavity from the injured bone. The reconstruction of a part of the face must always be postponed until all suppuration is over, and the wound is in a healthy condition. It then demands a careful planning of flaps and appliances, and much of the success depends on the preliminary treatment, keeping the oral cavity in good condition suitable for appliances or later oral applications. Case reports illustrating the possible varieties of wounds and their treatment are included with illustrations in the paper.

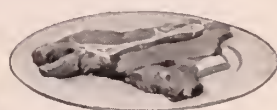
INFUENZA PNEUMONIA

A rather detailed account of experiments made to test whether specific antibodies were formed in influenzal pneumonia; whether the complement fixation test is of any value in confirming the diagnosis; whether one can demonstrate the presence of complement-fixing antibodies in the blood of patients recovering that can be found valuable in the serotherapy of the disease, and whether many or only one specific strain of B. influenzal becomes virulent, is published in *The Journal A. M. A.*, March 1, 1919, by F. H. Rapoport (New Haven, Conn.), Chelsea, Mass. The influenza bacillus found in more than 80 per cent. of the necropsies in the laboratory was used as antigen, and the presence of antibodies was demonstrated by the com-

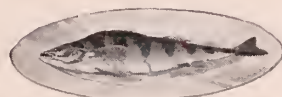
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plement fixation test. It was found that, while of the 300 control serums used, only 9.6 per cent. gave a positive reaction; 54.5 per cent. of 295 serums from convalescent influenzal pneumonia patients had antibodies that fixed complement. The complement-binding factor of serum from influenza pneumonia patients is probably a very weak one, but the results suggest strongly that the influenza bacillus forms specific antibodies that will fix complement when the organism is used as antigen. While the complement fixation test cannot yet be accepted as a diagnosis, it may be of some value, together with other diagnostic methods, in confirming the condition as having been present in at least more than half the cases. While complement fixation would indicate that influenza bacillus plays an important part in the complicating pneumonia of influenza, the findings furnish no conclusive evidence of its primary invasion.

MENINGITIS

E. H. Schorer (Kansas City, Mo.), New York (Journal A. M. A., March 1, 1919), reports his experience with the detection and management of meningitis carriers, at Camp Funston and later at the Army Laboratory at Hoboken, N. J. He finds that the method they used, based on Flexner's monograph, is practicable and decidedly better than the quarantining of contacts such as has been generally practiced. Cultures can be made from large numbers of troops at one time, and there is no evidence that the results are less accurate than when only a few are taken. The taking of cultures need not interfere with military work, and the taking out of carriers and putting them in a camp by themselves interferes less than quarantining a whole company. Detected ear-



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(3005)

riers may have the disease, but his experience showed that those who developed the disease were in the incubation period when the culture was taken. There is no evidence that chronic carriers develop it. Schorer finds the cotton swab on a straight

wooden applicator and the taking of cultures through the nose much more feasible when large numbers are to be taken than the use of the West tube and bent wire applicators. Full details of the methods used are given.

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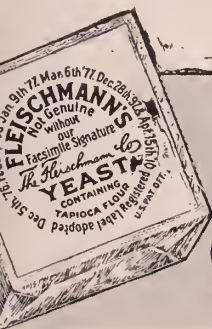
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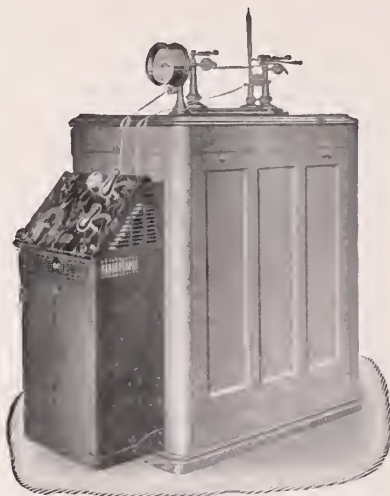
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EDITORIAL

UNITED STATES PUBLIC HEALTH SERVICE

Time to get after that early brood of flies, says the United States Public Health Service. Better to prevent the breeding of hundreds of flies now than to swat and trap millions of them in mid-summer.

The United States Public Health Service estimates that over seven million people in the United States are infected with malaria.

"Public Health is purchasable," says the United States Public Health Service, and adds that a first-class health protection service can be provided for one dollar per head per year. In fact some city health departments render excellent service at a cost of

seventy-five cents per head. Let's all get together and give better support to health work in this community.

Estimates prepared by the United States Public Health Service indicate in the South the ravages of typhoid fever, tuberculosis, hookworm, and pellagra, all together are not as serious as those caused by malaria.

Still relying on the Patent Medicine Almanac? Better discard it and get the new one issued by the United States Public Health Service, Washington, D. C. Sent free on request.

Uncle Sam will provide sanatorium and hospital care for all the boys discharged from army or naval service, so far as their sickness or disability was contracted in the service of their

country. The United States Public Health Service has already undertaken this stupendous task and is buisly engaged in enlarging its hospital facilities all over the country. One of the sanatoria will be located at Dawson Springs, a famous health resort in Kentucky; the loeation of the others has not yet been determined.

The United States Public Health Service submits the following list of "our animal friends" and wonders what we propose doing about it:

Anopheles mosquitoes, which carry malaria.

Aedes mosquitoes, which carry yellow fever.

Lice, (with military training), which carry trench fever.

Lice, (with or without military training) which carry typhus fever.

Flies, which carry typhoid fever, dysentery and other diseases.

Fleas, which carry bubonic plague.
Tsetse flies, which carry African sleeping sickness.

Hookworm, which is very much attached to man.

THE FLORENCE MEETING EXCEEDS EXPECTATIONS.

As we go to press the Florence meeting has just been concluded and full information in regard to it will appear in our next issue. Nearly two hundred physicians were there and very favorable comment was heard as to the success of the one day scientific session. The election of Lieutenant Colonel E. W. Pressly to be President of the Association for 1919 assures the membership of a leader whose popularity and brilliant attainments have long been acknowledged.

ORIGINAL ARTICLES

PATHOLOGIC ANATOMY AND BACTERIOLOGICAL FINDINGS IN 31 AUTOPSIES DURING RECENT EPIDEMIC OF INFLUENZA

By Jesse W. Smith, U. S. Naval Hospital, Charleston, S. C.

IN view of the fact that none of us who had an opportunity to study the pathology and baeteriology of the recent epidemic have agreed, especially on the bacterio-

logy, I feel it necessary to describe just how my autopsies were performed and for the bacteriological work, the kind of media used. The autopsies were performed as soon as possible after death. This being from one to six hours. The description of the body and gross descriptions of the organs were dictated to a hospital corpsman. Aerobic and anerobic cultures were made from the heart's blood. A Wassermann was also made from the heart's blood. Aerobic and anerobic cultures were made from the lungs. Pyrosode method was used for the anerobic cultures. Smears and cultures were made from the bronchi in

Read in Symposium on Influenza before South Carolina Medical Association, Florence, S. C., April 16, 1919.

most of the cases. The media were neutrant, and neutral to phenolphthalein blood agar, 0. 5% acid bouillon, and 0. 5% acid glucose bouillon. The blood agar was made as follows: To 100 c. c. of the 2% agar was added 2 c. c. of defibrinated human blood. The 2 c. c. of blood was first added to 8 c. c. of distilled water and allowed to stand about 5 minutes in order that some of the blood cells could be hemolyzed. This was added to the agar after it had been melted down and then cooled to 45 deg. C. This gave a media in which hemoglobin was in solution, and whole red cells present for detecting the hemolytic streptococci. The usual formula for making bouillon was also used in this work.

Of course all of my autopsies were on well developed and well nourished adult males, between 21 and 35 years of age. Icterus was found in nine of the subjects, in some very slight and in others very marked. As to whether this was of hematogenous or acatheeitic origin, I am unable to say. I am inclined to think it was of hematohepatogenous origin. Emphysema was found in the neck and on the upper anterior portion of the chest in five of the subjects. This was very marked in one case as it extended over the entire chest, shoulders, into the axilla and down the arms to the insertion of the deltoids.

An antemortem extravasation of blood was found in the left pectoralis major muscle in one subject. Cultures were made from this and found to be negative. An antemortem extravasation of blood was found in the left rectus muscle in 3% of the cases. One of these showed complete transverse separation of the muscle fibers.

Upon opening the body attention was immediately called to the lungs which as a rule met and overlapped

in the mid-line in such a manner as to obscure the precordial area. Emphysema was found in the mediastinal tissues and beneath the parietal pleura in the majority of the cases. This was easily detected because it gave a crackling sensation to the palpating finger. From 10 to 500 c. c. of fluid ranging from straw to coffee colored was found in the pleural cavities in the majority of the cases. The pleural cavities were completely obliterated by thick greenish-yellow fibrinous exudate in three of the subjects.

Type III pneumococci was found in one of them; type II in another, and in the third case no organisms were found. In these three cases positive blood cultures were found in both ante and post mortem specimens. The same type of organism in pure culture was found in each case.

Endocarditis was found in two subjects, one due to type II pneumococci, the other staphylococcus pyogenes aureus. These organisms were found in ante and post mortem blood cultures, and at autopsy in pure culture from the vegetations on the valves of the heart.

The case that was due to type II pneumococci was clinically a typical picture of unresolved lobular pneumonia.

Lungs:

Upon gross examination one could readily see that he was dealing with something out of the ordinary, because it was not a typical lobular or lobar pneumonia. In the majority of the cases the lungs were voluminous and preserved the form and size of the thoracic cavity after removal. The lower lobes were from pinkish-red to a deep slate blue color, and almost completely consolidated. The anterior edges escaped consolidation and show-

ed compensatory emphysema. Many hemorrhagic areas were visible, and varied from petechial spots to large extravasations of blood covering the entire lobe. The cut surface presented a complex condition, because in some it would be pinkish-blue to bluish-black in color, while in others it appeared dark-red to blue in color. It was not granular but showed numerous slightly elevated and indurated areas which varied in size from 1 to 5 mm. On microscopical examination these areas were found to be alveoli filled with polymorphonuclear leukocytes. The middle lobe and upper lobes presented a different picture. They showed a typical lobular pneumonia in the majority of cases. The unaffected areas showed marked emphysema. Cut surfaces of these lobes showed a varying degree of pathology. In the center of many of the consolidated areas I found cavities from which I always cultivated the staphylococcus pyogenes aureus. Microscopical examination showed necrotic tissue, numerous polymorphonuclear leukocytes and an extravasation of red blood cells. The pathology found in each case varied in accordance with the time the patient was sick before death and the type of organisms present.

A purulent bronchitis was found in the majority of the cases.

Heart:

The heart was well preserved with the exception of the two cases mentioned above no gross pathology was found. Microscopical examination, however, showed some cloudy swelling.

Kidneys:

The kidneys were slightly enlarged in the majority of cases the capsules

stripping easily and leaving a smooth injected surface. The substance of the kidney would bulge beyond the edge of the capsule. Microscopical examination showed wide spread cloudy swelling.

The spleen was slightly enlarged in a few, and in these microscopical examination showed blood sinuses to be engorged.

Liver:

Macroscopically the liver was not involved, but on microscopical examination showed marked cloudy swelling.

No pathology was noted in the stomach and intestines, and the peritoneum was usually rather dry.

The brain and spinal cord was examined in a few of the cases that showed mental symptoms before death, and no gross or microscopical pathology was found. The spinal fluids were examined and no organisms found.

The Wassermann was positive in only two cases. One a four plus and the other a three plus. There was other evidences of syphilis found on macroscopical examination of organs.

My bacteriological findings were as follows: I did not find the influenza bacilli in the heart's blood of any of the cases. I always found it in cultures and from smears made from the bronchi. I found the influenza bacilli, in pure culture, from the lungs in seven cases. In sixteen cases I found the influenza bacilli mixed with other organisms; four times with staphylococcus pyogenes aureus; five times with type IV pneumococci; three times with type III pneumococci; twice with type II pneumococci; once with hemolytic streptococci and once with Friedlander bacillus. In two of the cases I found only staphylococcus

pyogenes aureus. I always found a positive blood culture of the same organism. One case only of type II pneumococci; one case only of type III pneumococci; and in three of my cases I got no growth from the lungs or from the heart's blood.

PSYCHOSES FOLLOWING INFLUENZA

By J. F. Munnerlyn, M. D. Medical Director State Hospital, Columbia, S. C.

INFLUENZA has long been known for its multiplicity of complications. Sir William Osler states that it may be followed by almost every form of disease of the nervous system. The literature, however, with reference to mental disorders associated with influenza is especially conspicuous for its paucity. One author states "that among the most important of the nervous sequella are depression of spirits, melancholia and in some cases dementia." Another author says "among nervous sequella which are both numerous and important are to be noted especially insomnia, neuralgia, migraine melancholia with suicidal tendencies, meningitis and not infrequently delirium of a most acute form." But it was only recently that this subject began to be studied in the light of the new theories of insanity and an attempt made to properly classify the different types of psychosis associated with this malady.

From the best information obtainable the epidemic began in South Carolina about September 15. From its inception until January 20th, a period of four months, eighty-five cases were admitted to the State Hos-
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Florence, S. C., April 16, 1919.

pital, who came with the history that Influenza was the cause of their mental disturbance. On account of the difficulty in procuring a good anamnesis in some of the cases, data is complete in only forty-two and it is upon these forty-two cases that the conclusions arrived at in this paper are based.

Effort to make a correct psychiatric diagnosis was pursued in the usual manner. Each case was kept in bed for at least a week after admission, a thorough mental and physical examination was made and upon the completion of the examination the patient was presented at Staff meeting. Here, after a careful consideration of the mental, physical and serologic findings, the case was classified according to a preponderance of symptoms. Complying with this method it was found that the psychosis following influenza could be placed in four diagnostic groups. Group one comprises those cases known as the infection-exhaustion psychosis or delirious episodes. Twenty nine per cent (29%) were of this type. These cases presented in their clinical aspect states of delirium, characterized by clouding of consciousness, disorientation, confusion and transitory hallucinations both auditory and visual. As a rule, no history of mental peculiarities fore-shadowing the coming of a psychosis of this type could be obtained—they usually began suddenly, were the result of plain physical causes and after an average of ten days' treatment were apparently normal again. The history usually obtained in these cases was as follows: Patient A seemed to be making a satisfactory recovery, temperature gradually declining and there was every indication of a favorable prognosis. But it was noticed that he did not comprehend readily, there seemed to be some confusion and the patient be-

gan to stare wildly at those about him. In spite of the fact that he continued to improve physically, his mental symptoms gradually grew worse and on the fifth day there was marked clouding of consciousness, increased psycho-motor activity, causing such an alarming state of affairs until he was rushed to the Hospital as an emergency case. A few cases, however, presented little psycho-motor activity, showed only slight confusion, but complained of hearing imaginary voices and saw peculiar objects on the wall. One case, a white male, twenty-three years of age, who made an apparently uneventful recovery, while sitting by the fire, on the third day after getting out of bed, began to see letters on the back of the fire place—the letters would form into groups and spell various words. The patient became very much disturbed over this strange phenomena and three days later was brought to the Hospital. After two weeks' treatment this patient recovered, regained his insight and was able to return home. With the exception of three cases who were markedly prostrated and lived only four days after admission, all of the cases in group one recovered after two weeks' treatment and were able to return home apparently in good condition.

Group two comprises those cases known as the manic depressive psychosis, including both the manic and depressed phase. The term manic depressive is identically the same as acute mania and melancholia, which was used by the older psychiatrist. Formerly practically all excited and exalted patients were included under the designation of acute mania, while all depressed patients were classed as melancholia. From a study of the principal symptoms presented, it was found that twenty-four per cent

(24%) of the forty-two cases under consideration occupied this group. There were twice as many manics as depressed, which is contrary to the findings of the older psychiatrists who claimed that depression of spirits and melancholia were the chief psychotic disturbances following influenza. The clinical picture in these cases was identically the same as found in manic depressive psychosis occurring as a result of other causes. The manic reaction with its feeling of well being flight of ideas and over activity was well established in the manic cases, while the depressive reaction with its feeling of mental and physical insufficiency, mental retardation, a despondent and sad expression, was well marked in the depressed cases.

Group three comprises the cases of frank Dementia Praecox. This group also represents the largest number of cases, thirty-four per cent (34%) of those studied being diagnosed Dementia Praecox. Attention is called to the fact that quite a number of these cases presented symptoms not unlike the Infection-Exhaustion psychosis. It frequently appeared that the patient was suffering from a delirious episode—the delusions and hallucinations were dream like and the patient seemed to be confused, but upon further observation, the symptoms of Dementia Praecox were so clearly revealed until there was no mistake in the diagnosis. No history of a definite psychosis prior to the attacks of influenza could be obtained in any of these cases. But, after carefully questioning their relatives, it was ascertained that most of them showed certain peculiarities or traits long before the actual break came. These peculiarities were usually of an apparently trivial nature, as expressed by the father of one patient "he was always a little moddy, was

quick to get mad and didn't associate with other boys and girls very much." In such cases, I do not believe that we would be far wrong in considering influenza as an etiological factor of Dementia Praecox, merely as the proverbial last straw on the camel's back. Symptoms of this type of psychosis occurred on an average of ten days after the acute symptoms of the Influenza had subsided.

Group four comprises the unclassified cases. Ten per cent (10%) of those studied were placed in this group, due principally to a lack of information, atypical symptoms and a difference in opinion on the part of the Staff. It may be anticipated, however, that a large number of those unclassified cases will eventually fall into class three.

Conclusions

1. That from a study of forty-two cases of insanity following Influenza, three types of Psychosis were recognized, namely, Infection Exhaustion Psychosis, Manic Depressive and Dementia Praecox.

2. Numerically Dementia Praecox is the most frequent type of psychosis occurring in thirty-four % of the cases. It may be added, however, that quite a number of the Infection Exhaustion cases were probably treated at home and recovered before it was necessary to send them to the Hospital.

3. The average age of all cases was twenty-six years. The ages ranged from fifteen of forty.

4. The average time between the subsidence of the acute symptoms of Influenza and the beginning of the psychosis was seven days. The time ranged from one day to three weeks.

5. The duration and severity of the attack of Influenza seemed to have practically no bearing upon the de-

velopment of a psychosis. Most cases gave a history of recovering from the attack of Influenza without trouble.

6. Influenza acts as an important exciting cause in producing insanity, the infection exhaustion psychosis being liable to occur in any patient of low resistance—the Manic Depressive and Dementia Praecox types occurring usually in those individuals showing peculiar personal characteristics long before the attack of Influenza.

PRESIDENTIAL ADDRESS

To the South Carolina Medical Association, Florence, South Carolina,
April 16, 1919.

By James A. Hayne, M. D., Columbia, S. C.

Ladies and Gentlemen, Fellows of the South Carolina Medical Association:

THE honored conferred upon me by this Association at the Aiken meet in making me your president was one little merited and as far from my dreams as possible. When one recalls the galaxy of names of men who have been honored with the presidency of this Association and reflects upon the distinction they had attained in their profession, or which they have afterwards achieved, one can only believe that, as was said to me by a member when congratulating me upon my nomination, "presidential timber is certainly getting as scarce as the long-leaved pine." Fellows, I appreciate the honor done me, and consider it the acme of distinction in a medical career.

President of the South Carolina Medical Association! A proud title indeed, and one recalls the beautiful words of the "Choir Invisible," for one feels surrounded by the spirits of the

great and good men who have held that title. "O, may I join the Choir Invisible of those immortals who live again in mind made better by their presence, live in pulses stirred to generosity, in deeds of daring rectitude, in scorn of miserable aims that end in self, in thoughts sublime that pierce the night like stars, and with their mild persistence urge man's search to vaster issues * * * * * This life to come which martyred men have made more glorious for us who strive to follow. May I reach the purest heaven; be to other souls the cup of strength in some great agony; enkindle generous ardor; feed pure love; beget the smiles that have no cruelty; be the sweet presence of a good diffused and in diffusion evermore intense, so shall I join the Choir Invisible, whose music is the gladness of the world."

How truly this poem comes home to us when we think of our glorious heritage of freedom, bequeathed to us by the bravery of South Carolina's sons who laid down their lives on the fateful field of France. Never can their glory fade, and we should remember how well our profession carried out its traditions, earning all praise for their self-sacrifice and courage. The long honor roll of South Carolina physicians is written in the book of the brave wherein are inscribed the names of those who have ever placed country first and self-interest last. Fellows of the South Carolina Medical Association, shall we not take the torch relinquished by the dying fingers of our heroes in France, that torch which lighted the world to freedom, and which was borne triumphantly through all pain and peril until that Hindenberg line of doubt and despair which surrounded the world with a pall of darkness was broken by our

sons who drove the Hun reeling back into his own lands. Shall we not make South Carolina worthy of such heroes? Must we not keep faith with those who sleep in Sunny France? Shall we not drive illiteracy, squalid poverty and diseases bred of ignorance from out this State, and truly make South Carolina the real Elysian Fields she seemed to our sons when they longed for her in the mud and filth of the trenches and in the agony of wounds in many hospitals?

Two pledges were made by me on election—namely, the establishment of a Bureau of Child Hygiene for South Carolina, and that there should be provision made for the care of tuberculosis among the negroes of the State. That I am able to report to you that I have kept these pledges is due largely to the work of our Secretary, Dr. E. A. Hines, who has never ceased to strive for the establishment of a Bureau of Child Hygiene, and also to the energy, zeal and unfaltering faith of Mrs. Annie E. Rembert, Field Secretary of the Tuberculosis Sanatorium, who spends herself in the effort to have our Legislature see the necessity of fighting the Great White Plague, and the impossibility of successfully doing this if the claims of the tubercular negro were ignored. A Bureau of Child Hygiene has been established by the State Board of Health with the appropriation of \$10,000, granted by the Legislature. Mrs. Ruth A. Dodd, a graduate nurse trained in this work, will have charge of the Bureau, assisted by an advisory council. The work of this Bureau will be fully explained at this Session, and I feel sure that the establishment of this Bureau is an epoch in the history of South Carolina. The Legislature appropriated \$10,000 to build a negro sanatorium at Columbia, and the negroes are subscribing

and intend to supplement the \$10,000 by a gift to the State of \$10,000. With this money we propose to have an up-to-date sanatorium for negroes at State Park near the site of the present white sanatorium.

We will need help from our Association in making both the Bureau of Child Hygiene and the negro tuberculosis sanatorium a success, but I have no fear of lack of interest and aid from the profession, a large number of whom have for their Alma Mater the Medical College of South Carolina, whose motto is "Augiemus largiendo"—"we grow by giving," and all of whom are imbued with the traditional love of their fellow man, which is ever the watchword of the man of medicine.

No rose is without a thorn, and the sweetness of knowing that one has been elected president is always tinged with the bitter thought that sooner or later one must make an address. This shadow, at first no bigger than a man's hand, grows until it overshadows the horizon and all is gloom. It is said that one of the evils that will be removed from earth after July—when the coming of the great drought will cause beverages like whiskey, beer and wine to become traditional like the mead of the old Norse Vikings—will be the abolition of after-dinner speeches, for no one would have the cruelty in cold, sober blood to inflict one, and no one without the courage known as "Dutch" could endure one. Perhaps, therefore, my successor in office can bear his blushing honors full upon him without the gloomy thought that all these honors means that he must prepare an address. However, the custom has not yet been abolished, and I will, therefore, plunge in medias res, as the Latin used to say.

In trying to find a subject for a discourse which would entertain and enlighten, and about which I could find literature that I could conscientiously copy, I have chosen the following: "Plagues and Pestilences, Ancient and Modern." This seemed to me a timely subject, for after our experiences in the past year with influenza, our minds naturally revert to other pestilences that have afflicted the world since recorded history. The first plagues that we have record of are the plagues of Egypt, and we are struck by the natural sequence of events as described in Exodus. First, the waters of the streams became polluted, unfit to drink and on account of their red color from mud and other impurities were said to have been turned into blood. Then the fish died and myriads of frogs made their appearance. The frogs died and upon their decaying bodies swarms of flies fed. Then the cattle died and as a consequence of the death of the cattle—which died because the water was unfit to drink—the last plague was a natural result—namely, the death of the first-born. A modern epidemiologist would have predicted that the little children would be sacrificed in a land where sanitation was evidently unknown. Remember that this was before the sanitary laws of Moses, those laws which have stood the test of ages and are even now the best basis for the sanitation of a community, and no doubt Moses laid great stress upon these sanitary laws after his experiences in the land of Pharaoh. Mankind has ever struggled against these overwhelming and little understood agencies which again and again have destroyed millions of people. The history of medicine is a history of struggles to prevent pestilences, as well as how to cure disease. Without

a clear differentiation between various pestilences it is probable that the greatest pandemics have been either what we now call Bubonic Plague, Cholera, Small Pox or Influenza, and I will endeavor briefly to give some account of these four pestilences that walk in the noon day. Typhus fever, Yellow Fever and Malaria have killed their thousands, but from the way in which these diseases are spread could hardly become pandemic. The first four have scourged the world from time immorial. Three of these, Plague, Cholera and Small Pox, have been conquered by medical science, and as long as the light of knowledge shines out in the dark places of the world, mankind is safe from the Black Death, Cholera and Small Pox; but Influenza, that medical sphinx, still claims its thousands of victims, and every fifteen to thirty years sweeps the world and has baffled medical science. The last dread epidemic was perhaps the greatest the world has ever known, and has taken its toll from every known country, and has spared no race; oceans have not kept it in bounds, nor have the highest mountain chains prevented its spread.

Bubonic Plague

Thucydides in 430 B. C. gives a most interesting account of a plague which ravaged Athens, then besieged by the Spartans. His description easily identified this plague as the modern Bubonic Plague. That clear writer of the Jewish times A. D. 72, Josephus, describes Bubonic Plague in Jerusalem. Again in Rome during the reign of Vespasian in A. D. 77 we find this plague, evidently brought back by the soldiers from the siege of Jerusalem. It appears to have been present in Rome under Marcus Aurelius, under Commodus and under Gallienus in

262 5,000 people died daily. Under Justinian we first see a condition which resembles conditions found in Boston in 1918—namely, that although 1,000 grave diggers were employed they were unable to bury the dead.

In 565 at Treves it was first called the *Pestis Inguinaria*, thus definitely proving it to be modern Bubonic Plague. Skipping over the centuries to 1347, we find that it was known as the Black Death. Boccaccio describes the plague and its physical and moral effect upon Florence. Horrible pictures are drawn of the distress occasioned by this disease. In 1563 it was introduced into England by the return of the English army from the continent. There was also a strange disease at this time which was called the English Sweat and spread over Germany, which people gave it this name, and perhaps accounts for the Hymn of Hate we are so familiar with as preached by the Germans. 1603, 1625, 1636 and 1665 are the dates of the great ravages of plague in England. As Bubonic Plague is ever present in the Far East, in Turkey and other lands, ever and again it has been brought into Europe and our quarantine laws have been built up on the fear of this disease and of Cholera. The Ancients endeavored to stop its ravages by sacrifices, and the Christians by prayers and processions with holy relics, etc. The Chinese endeavored to drive off the devils by shooting fire-crackers, by beating on gongs and by other methods equally as absurd. Modern knowledge teaches us that Bubonic Plague is primarily a disease of rats, and secondarily a disease of man, and that it was conveyed by the diseased rats to man by fleas, and thus by finding out the cause we can rationally expect that never again will the world be stricken

by a pandemic of this ancient enemy of man. The history of our victory over this disease is a most interesting one, and you will pardon me if I bring to your mind what is to you a well known story. It was not until 1893 when Bubonic Plague appeared in Hongkong that the *Bacillus Pestis* was discovered by Kitasato and independently by Yersin. The Plague made its appearance in the United States in San Francisco in 1909, and the Plague work there was under Rupert Blue of a distinguished South Carolina family, now Surgeon-General of the United States Public Health Service. The work of Blue was directed principally toward rat-proofing buildings, the destruction of rats and the prevention of the landing of rats from infected ships. Unfortunately, the disease spread from rats to ground squirrels, field mice and rock squirrels. As has been stated before, the ordinary spread of this disease is from rats to man through the flea. The rats principally concerned in the transmission of the disease is the *Epimys Rattus*, and the flea is the *Xenopsylla Cheopis*. There is one thing, however, to be said about Bubonic Plague—namely, that there is a form known as the Pneumonic Plague. The transmission of this form is direct from patient to patient, and the bacilli are thrown out by coughing or hawking. An epidemic of this occurred in 1910-11 in Manchuria and was studied by the American Red Cross Expedition under Strong, Teague and Barbour, also an independent investigation by Asst. Surgeon Dr. Carter at Mukden. We have a definitely curative plague seer prepared by Yersin. It has been disappointing in severe cases, but in mild cases it is very efficient. The names that will ever be remembered in this country in regard to Plague work

will be Blue, White and McCoy, all of the United States Public Health Service.

Cholera

“In this disease we have to differentiate between Cholera Nostras, which means cholera belonging to our own country, and Asiatic Cholera. Cholera is ever present in India and the Delta of the Ganges. It spreads from India to the shores of the Red Sea, Egypt and the Mediterranean—this by trading vessels, whereas by land it goes to Northern India, Afghanistan, Persia, Central Asia and so to Russia. The attention of European physicians was first called to this disease in 1817. It reached London in 1832 and then crossed the Atlantic and spread to North and Central America. It advanced about as rapidly as a man could walk in a day, hence Eugene Sue in his wonderful story of the “Wandering Jew” wove the tradition of that time into his story that Cholera was carried by the “Wandering Jew” in his travels up and down the world, and thus pictures the terrible punishment of the “Wandering Jew;” who brought with him the pestilence and though doomed to live himself forever, or as tradition has it that he was told to “tarry ‘till I come,” these being the words of the Master to him, he brought death to all he loved by conveying to them the dread disease, Cholera. One of the most striking epidemics occurred in Hamburg in 1892, and from thence to England and to the United States. Here its speed was so great that it emphasized the Progress mankind had made in getting from one place to another. It traveled no longer by slow stages, such as it did when man’s mode of transportation was limited to the horse, the camel and on foot. In Hamburg 16,956 people had the disease and 8,605

died. At the cemetery which was about ten miles from town hundreds of men were employed digging trenches into which double rows of coffins were placed. Seventy-two cases were brought in by seven vessels into the United States. Sixteen others occurred on shore, but there was no spread, which shows how wonderfully well we are protected by the efficiency of the United States Public Health Service. This epidemic taught the world how to protect itself. It taught us that the disease was only spread by drinking water and by unecooked food and fruits, and the civilized nations of the world have pledged themselves to notify all other nations if a focus of infection was found. The United States has been free from Cholera since 1832, when a terrible epidemic occurred, and all churches, schools and public gatherings were forbidden. Protection of drinking water supplies is an absolute safeguard against an epidemic of this disease.

Small Pox

"We public health men owe a debt of gratitude to Small Pox, for by that name we conjure. It seems to be the only contagious disease that mankind is really afraid of. Almost all boards of health legislation was slowly formulated and based upon this universal fear that people have of Small Pox. This fear is evidently a survival transmitted from generation to generation since the time when this disease was regarded as the most loathsome, most deadly and most to be avoided of all diseases. Much obscurity surrounds this disease, it dates back in a clear history to the Sixth Century, and Rhazes, a Ninth Century Arabian physician, describes it. It was introduced into America by the Spaniards. It has been an enormously expensive

disease, for not only does its fear inspire laws for its prevention, but also it will drag from the unwilling purse of the tax-payer more money for its prevention than any other disease. I will not burden you by detailing the discovery by Jenner of vaccination in 1796, or tell you about Lady Mary Wortley Montague, who was probably one of the first suffragettes. Suffice it to say that one hundred years ago women whose complexions had not been spoiled by small pox were so rare that they were regarded as curiosities, and that in the Seventeenth Century 15,000,000 people died. As a contrast there have been two deaths from Small Pox in South Carolina in the past three years. Compulsory vaccination of children is the only answer to the problem of How to Prevent Small Pox.

Influenza

We now come to the great problem, for of the preceding diseases we have learned the cause, the mode of transmission and the method which will prevent their spread, but with Influenza, how different a story. With all the skill and present knowledge of preventive medicine, influenza killed over 400,000 people in the United States, and in South Carolina caused over 10,000 deaths and over 400,000 cases in a brief period.

I do not know whether we are much better off than the Italians were in the Seventeenth Century, who ascribed influenza to the influence of the stars. It is also ascribed to earthquakes and volcanic eruptions. It has appeared in fleets at sea far away from all communication with land. This occurred to Admiral Richard Kempenfelt. We note, also, big epidemics, one in 1847 which lasted about eight years, and another one in 1890, and it seems to prevail independently of climate, sea-

son or weather. It has nothing to do with a bad cold, but is an acute specific fever of unknown origin.

Your president had the honor to be present in Chicago in December, 1918, and was made a member of the Sub-Committee on Measures for Prevention, of which Dr. Rupert Blue was Chairman, Dr. W. A. Evans of Chicago and Dr. M. S. Fraser of Winnipeg, Manitoba, were fellow members, of which Dr. W. H. Park of New York was Chairman. A Sub-Committee on History and Statistics, of which Dr. William H. Davis was Chairman, and a Sub-Committee on Measures for Relief, of which Dr. D. B. Armstrong of Framingham, Massachusetts, was Chairman. There were sixteen in all of this Committee, and we sat in a room of the hotel from eleven o'clock in the morning until two o'clock that night, having our meals served and debated and discussed Influenza. The Bacteriologists confessed that they did not know the cause. The Statistical Committee was strong in their report, as they could say how many had had the disease and how many had died.

The Committee on Relief was exhaustive in its report, suggesting every known method for the relief, even going so far as to suggest the purchase of a trench digging machine in large cities, so that people could be buried when grave diggers failed. But the Committee on Measures for Prevention could not come to any amiable agreement, because conditions differed so widely in congested cities like New York, Chicago, Detroit and San Francisco from the conditions prevailing in rural districts, and the city man tried to force his measures for prevention on the countryman, and the countryman insisted upon treating

the city man with a dose of rural medicine. The closing of churches in Chicago would perhaps affect one-tenth of one percent of the population. The closing of churches in rural districts would prevent contact of probably twenty-five percent of the population, and thus we discussed from morn 'till dewey eve, reminding me very much of Gulliver's account of the political kingdom he visited where the main point of dispute was whether one should break an egg at the big end or at the little end.

The epidemic in South Carolina first made its appearance on September 21 in Abbeville, at least it was first reported there. Then Newberry took up the tale on September 25 when one hundred cases were reported. After that it spread so rapidly that the Health Officer is unable to give the chronology of its occurrence. At the Symposium to be held at this meeting you will learn of this disease.

Now, Ladies, Gentlemen and Fellows, remember the reward that was promised to them who endure until the end. I am now going to describe probably the worst epidemic that afflicts mankind. It is described by the Latins as *Cacoethes Scribendi*—the Itch for Writing, and as a companion disease which is known as the *Casoe-thes Loquendi*—this disease has ever been prevalent and has afflicted mankind since the time of Job, for you remember that Bildad the Shuhite, after listening to Job who had catalogued to him all his woe—his boils, his blains, his loss of wives, his loss of cattle and all the ills that befell poor Job—finally exclaimed "Oh, Lord, will he never make an end of speaking?" For fear that this may be your inward comment upon this address, I now close.

A B S T R A C T S

The following are abstracts from editorials published in The Journal of the American Medical Association for March 15, 1919:

EPIDEMIC OR LETHARGIC EN- CEPHALITIS

Acute Infectious Ophthalmoplegia, Acute Encephalitis, Nona?

This unfamiliar disease, many cases of which were observed in England and France early in 1918 and in Vienna in the winter of 1916-1917, when von Economo suggested the name "encephalitis lethargica," now seems to be making its appearance in various parts of this country. In the recent discussion on influenza before the Institute of Medicine of Chicago, Bassoe stated that during the last few weeks he had seen several cases which were characterized by marked drowsiness and paralysis of cranial nerves, especially the ocular, and which otherwise corresponded to the clinical picture of lethargic encephalitis, and that he knew of similar observations by other physicians. Last week Pothier reported the clinical details of eight cases from Camp Lee, Va., and Neal mentions the occurrence of cases in New York.

In previous editorial discussions of the European, especially the English, reports on lethargic encephalitis, special emphasis was placed on its similarity to the cerebral and bulbar forms of epidemic poliomyelitis, and it was suggested that further investigations might show "the new disease" to be true epidemic poliomyelitis. In

the meantime, the report of an extensive collective investigation of lethargic encephalitis (168 cases) has appeared from which we learn that, while nothing by way of a causal agent has been demonstrated, intracerebral inoculations of monkeys with emulsions of diseased nervous tissue failed completely to produce any results. As the monkey is readily susceptible to such treatment with similar material from cases of epidemic poliomyelitis, the present indications are that the two diseases are separate and distinct, and this conclusion is borne out also by certain clinical and epidemiologic differences to which attention has been called, by Netter in Paris, especially. It is noteworthy, however, that the anatomic changes in the two diseases are of the same general nature, and MacNalty ventures the suggestion that the relation between epidemic poliomyelitis and lethargic encephalitis may be comparable to that between typhoid and paratyphoid fevers. The English investigators consequently regard lethargic encephalitis as due to an as yet unknown virus which causes inflammatory changes, especially perivascular infiltrations, in the basal ganglia, the upper part of the pons, especially in the gray matter of the floor of the fourth ventricle, and in less degree elsewhere in the medulla. It is distinctly a polioencephalitic disease: the outstanding clinical features are a more or less pronounced lethargy, often progressive, and paralysis of the third and less often other cranial nerves. Ophthalmoplegia was observed in about 75 per cent. of the English cases.

It is noteworthy that cases appear to occur with the general symptoms of fever, lethargy and weakness, but without paralysis, and hence are easily mistaken for more common infections, though perhaps of the greatest importance in the spread of the disease, which now is notifiable in England and Wales. At present, however, no new cases seem to be occurring in these countries. The results of further and more complete observations of lethargic encephalitis as it occurs in this country will be awaited with special interest.

It is quite remarkable that while English and other European observers do not seem to place any special stress on the relation of the newly recognized disease to influenza, the American cases so far reported are associated by the observers, particularly Bassoe and Neal, more or less directly with influenza. Four of Pothier's eight patients are said to have had influenza a few weeks before they came down with lethargic encephalitis. While the question thus raised cannot be answered at this time, the information we now have indicates that it is only in connection with epidemics of influenza that anything definitely resembling lethargic encephalitis is described in the older literature.

It is said that profound and prolonged sleep has been observed in connection with many epidemics of influenza since early times. Zuelzer mentions that in the epidemic of '712, somnolent conditions were so frequent and so marked that in Tübingen, for instance, the disease was known as sleeping sickness, and Longuet gives a quotation from Camerarius which appears actually to describe ophthalmoplegia. Coming down to more recent times, we find that in the early nineties of the last century, at the time of the influenza out-

break of 1889-1891, quite a little was written about a since forgotten disease called "nona" (also "la nonna"), which is said to have occurred especially in northern Italy and Hungary, but also elsewhere, and of which lethargy and weakness were pronounced manifestations. At about the same time cases of ophthalmoplegia with stupor and somnolence were described by Blanc, Mauthner and others, and the question was raised then whether "nona" was not a kind of ophthalmoplegia. "Nona," however, failed to establish itself as a definite disease, and was soon forgotten completely.—*Jour. A. M. A.*, March 15, 1919.

TAKING CHANCES IN BLOOD TRANSFUSION

Transfusion of blood or blood constituents has become a necessity in modern clinical practice. Its general utility is unfortunately still limited by a number of difficulties of technique and incompatibilities of blood that have not been satisfactorily mastered. None of our present methods—the syringe cannula, the paraffined tube and the citrated blood procedures—are absolutely free from all objectionable features, among which unanticipated hemolysis, agglutination of the corpuscles, and febrile reactions are included. Of the dangers due to incompatibility we shall consider particularly those due to agglutination rather than those due to lysis.

In 1900, Landsteiner first suggested that human being might be divided into definite groups according to whether or not the corpuscles of one were agglutinated by the serum of the other, or vice versa. His preliminary grouping into three classes was subsequently shown to be somewhat inac-

curate, and numerous examinations made since that time have definitely shown that there are four groups. As long ago as 1907, Hektoen said: "From the practical point of view, isoagglutination of human corpuscles is of immediate interest in connection with the determination of the opsonic index and with transfusion of blood." It will be remembered that in 1906 Crile had successfully transfused blood from normal to diseased human beings. Hektoen also said, in commenting on this achievement: "The occurrence of isoagglutinins in human blood suggests that under special conditions homologous transfusion might prove dangerous by leading to erythrocytic agglutination within the vessels of the subject transfused." Since 1906, transfusion has been performed on such a multitude of persons in such a great variety of disease conditions that there is good evidence to show the necessity for again repeating warning of Hektoen to the effect that the presence of these isoagglutinins in human blood may be a danger during transfusion. Cases of transfusion in human being with seemingly unfavorable results due to cross-agglutination were reported by Schultz (1910), Hopkins (1910) and Ottenberg (1911).

The subject has been somewhat complicated by the introduction of the citrate method of transfusion, whereby the agglutination of the blood during transfusion is prevented by the addition of a small quantity of sodium citrate. This method of transfusion, being relatively easy, has become quite a vogue, and has led many observers to believe that preliminary tests of the compatibility of donors' and recipients' blood are unnecessary. This appears to have been the case especially with some of those who utilized the transfusion of convalescents' blood as

a means of treatment during the recent epidemic of respiratory diseases. Recently Pemberton has reported on 1,036 blood transfusions, and he further emphasizes the need of preliminary tests. This large series of transfusions was made in the Mayo Clinic between 1915 and 1918, thirty-five of them by direct methods and 1,001 by the citrate method. Pemberton is convinced of the importance of preliminary tests before transfusion. He points out that Bernheim in 1915 collected data of 800 transfusions by twelve different operators, and reported hemolysis in fifteen cases with four deaths. In twelve cases in the series of transfusions in the Mayo Clinic there were group reactions. In every case in which the blood had been grouped by the microscopic test, the observers were able to locate later the error in the test, most of them due to clerical errors in recording the group of the donor or the recipient. He describes a typical reaction, such as occurs when transfusion is done between persons of incompatible groups:

They occur early after the introduction of 50 or 100 c.c. of blood; the patient first complaining of tingling pains shooting over the body, a fulness in the head and an oppressive feeling about the precordium, and, later, an excruciating pain localized in the lumbar region. Slowly but perceptibly the face becomes suffused, a dark red to a cyanotic hue; respirations become somewhat labored, and the pulse rate, at first slow, sometimes suddenly drops as many as 200 to 30 beats a minute. The patient may lose consciousness for a few minutes. In one half of our cases an urticarial eruption, generalized over the body, or limited to the face, appeared along with these symptoms. Later the pulse may become very rapid and thready;

the skin becomes cold and clammy, and the patient's condition is indeed grave. In from fifteen minutes to an hour, a chill occurs, followed by high fever, a temperature of 103 to 105 degrees, in which the patient may become delirious. Jaundice may appear later. The macroscopic appearance of hemoglobinuria is almost constant. In three such instances the symptoms were not recognized at the time of transfusion, and 500 c.c. of blood were injected. All the patients died, two in one and three hours, respectively, following the transfusion, and one became comatose shortly afterward and died thirty hours later. In the other nine instances the symptoms were early recognized and interpreted, and the transfusion was concluded after the injection of 50 to 100 c.c. of blood. Adrenalin (epinephrin) and atropin were administered with good effect. There was no mortality in this group.

He concludes that these cases "point out most strikingly the fact that the injection of incompatible blood, namely, in which the donor's cells are agglutinable by the serum of the patient, is attended by the development of symptoms of the gravest nature, and that if these are not early recognized and the transfusion concluded before the injection of a large quantity of blood, fatal results are to be expected."

In the case of citrate transfusions, certain special untoward factors concerned have been made the subject of study in man by Drinker and Brittingham at the Harvard Medical School laboratories. They have failed to observe any constant relation between the method of citration or the purity of the citrate used and the number of reactions. The objectionable component resides in the cells of the blood;

for citrated plasma, thoroughly freed from all formed elements by prolonged high speed centrifugalization or by porcelain filtration, is singularly non-toxic, contrasting markedly with serum in this regard. On the other hand, the washed whole cell content of blood is uniformly toxic, whether injected into the individual from which the cells have been removed (plasmapheresis) or into different individuals who have been tested and show no agglutination or hemolysis of red cells.

A further analysis of the location of the factors in the cells responsible for the difficulties indicates that reactions decrease as the platelets are removed from the transfusion mixture. The Harvard investigators report that salt solution, red cells, white cells in greatly reduced numbers, and absence of platelets make the most perfect blood for transfusion that they have observed. Apparently changes in the platelets as a part of the process of coagulation represent a transformation responsible for the appearance of toxicity. The leukocytes themselves seem to be devoid of incompatibilities. Finally, they seem to have shown that citration harms the red cells, thereby promoting the possibility of hemolysis in otherwise compatible bloods. They found 44 per cent. of reactions with citrated blood, as compared with 20 per cent. of reactions when uncitrated blood transfusions were performed. They state that 20 per cent. is a decidedly lower percentage of reactions than has been obtained with any other method.

Contrasted with their small series, however, is that of Pemberton, who found only 219, or 21 per cent., of reactions in the 1,036 cases which he analyzes. Lewisohn has also recently reported 200 cases, and is convinced

that the frequency of chills is about the same with the citrate as with other methods. He, too, found reactions in 20 per cent. of his cases.

Thus, one by one, the detrimental factors in transfusion are being recognized. The next steps consist in devising ways to avert or eliminate them and thereby make a frequently desirable performance more dependable and less threatening.—*Jour. A. M. A.*, March 15, 1919.

The following are abstracts of articles in the issue of *The Journal*, March 15, 1919:

SUPERFETATION

A. W. Meyers, Palo Alto, Calif. (*Journal A. M. A.*, March 15, 1919), says that without exception the alleged cases of superfetation except perhaps in mammals with bicornate uteri are equivocal. It is easy to see that aside from ectopic implantations the conditions necessary for superfetation in the human subject are entirely different. The older of two fetuses would have filled the uterine cavity rather effectively, entirely aside from the possible effect of the cervical mucous plug. An obstacle to the implantation might also be found in the condition of the decidua, not to speak of the development of the first fetus and the corpus luteum. Loeb has found that in the pregnant guineapig the endometrium cannot be stimulated to form a new decidua. The difficulty is evident in case of similar conditions in the human species. If a young blastocyst really can be implanted on the bare surface of an ovary or on the peritoneum, it may well be doubted whether a new decidual reaction is necessary. Furthermore, when im-

plantation in the graafian follicle has occurred, there probably is no decidual reaction comparable to that in the uterus, though a corpus luteum might act vicariously to some extent. There are other obstacles, however, such as possible occlusion of the uterine tubal orifices with the hyperplasia of the muscles during pregnancy. While ovulation and menstruation are apparently not simultaneous, successive ovulations are probably periodic, and separated by considerable intervals. While cases of ovulation during pregnancy have been reported, so little is known as to exact conditions that they are undecisive. Alleged occurrence of superfetation involves a series of assumptions, and the conclusion of Gustetter that it is a frequently overlooked cause of abortion seems rather venturesome. The possibility of superfecundation, however, is not necessarily excluded, as ova from same ovulation still might be fertilized by spermatozoa from the same or a subsequent coitus. The relatively limited vitality of the unfertilized ovum would render it difficult to recognize such cases, and to try to account for the discrepancy in size or development of two fetuses by two ovulations far removed from each other does not remove the difficulties. The occurrence of superumerary litters in certain mammals is discussed, and Meyer finds difficulties here, also. Misinterpretation of finding is easy for the general practitioner, but doubts are raised among specialists. Meyer deals particularly with the cases in the Mall collection which have come to his notice and which have been regarded as evidence of superfetation, and finds in them evidence of the possibility of death of a twin fetus rather than cases of superfetation. He concludes that under specially favorable conditions the oc-

currence of gross differences might be found in some cases of twin pregnancy, and may be largely responsible for the quite general belief in superfetation. The article is illustrated.

STREPTOCOCCUS HEMOLYTICUS

A. H. Buncie, Louis Berlin and C. E. Lawrence, A. E. F., France (Journal A. M. A., March 15, 1919) present the data obtained in the study of the bacteriology of war wounds, as seen in Base Hospital No. 43. The study included a series of 1,848 cultures made on 985 consecutive war wounds. *Streptococcus hemolyticus* was isolated in 24 per cent. This was not indicated by the clinical appearances. Its presence was determined by culture. The presence of this organism is the chief cause of the failure of secondary suture, and therefore no wound showing a positive culture of it should be closed. Other things being equal, its presence approximately doubles the length of stay in the hospital as compared with wounds not showing it. A neutral solution of chlorinated soda (Dakin's solution) is of value in clearing up these wounds, but its action is much slower than in wounds showing the same clinical features but not on culture the *S. hemolyticus*.

MOSQUITO CONTROL IN RICE-FIELDS

report on the experimental tests of control methods against mosquitos in the ricefields at Lonoke, Ark., by J. A. Geiger and W. C. Purdy, of the Public Health Service, is published in the Journal A. M. A., March 15, 1919. Both *Anopheles* and *Culex* breed in moderate abundance in the flooded

fields, and the tests were made on ten small fields of one acre each, isolated by levees but forming a part of a larger ricefield. To reduce breeding of mosquitoes in ricefields, several things must be considered which restrict the work somewhat. The safety of the rice crop must be respected, and expense must be moderate. Water was dipped along the levees, a composite dipperful being taken every twelve feet and each dipper partly filled at shorter intervals. This process was repeated in midfield. The total number of larvae and pupae was called the "catch" but the presence

"catch" but the presence of other forms of life was recorded. Beginning with August, definite count was kept of beetle larvae and damselflies, and the examination included inspection of aquatic insects and their larvae, also of fish and crayfish, and of various aquatic plants, such as algae. The applications were made with fuel oil at the entrance gate, but its distribution was slow and unsatisfactory. Use of unsaturated sawdust, however, gave highly satisfactory results. The rice was not injured, and repeated examinations of the plot from four days to two weeks after application of the oil gave wholly negative results as to larvae. A mixture of two parts of kerosene and one of black oil was found unsatisfactory on one farm, but fairly satisfactory on the other. The action of top minnows was largely confined to the deeper water, along the levees. Their introduction effected a considerably lessened number of mosquito larvae. Intermittent flooding was tried on the farms but was not altogether satisfactory. They find that flooding, as a control method, is hardly feasible, owing to the expense and the impossibility of preventing the transfer of mosquitoes beyond flight distance. The

minnows are considered a doubtful measure owing to their preference for the deeper waters. Their presence, however, does mean a considerable reduction of larvae, and they are very few or are absent in roadside ditches, which, however, are not comparable with the ricefields. The various varieties of oil applied by the drip-can method proved a failure. The results when saturated sawdust was used offer hopes for future control within reasonable flight distance of communities, and a corresponding reduction of the malaria incidence. Several tables are given with the article.

CALIPER TREATMENT

D. W. Crile, Edmonton, England (Journal A. M. A., March 15, 1919), discusses certain points of the treatment of fractures of the femur by the caliper method, introduced into general surgery by Lieut. Col. Besley, U. S. A., and recommends it very highly. The value of the caliper in these cases lies in the fact that a direct force can be applied to the bone without damaging it and without penetrating its cortex. The penetration of the cortex implies misuse of the instrument or a defect in its construction. The original instrument is better than some of its modifications. Penetration of the cortex depends on several factors, but chiefly on the shape of the caliper points. A long thin taper is the worst. The relative length of the handle arm is also important, and when the handles widely diverge the chance of penetration is greater. The arrangement of the cords at the handle ends has also much to do with the pressure. The position on the femur is another great factor. But most important of all is the joggling or con-

stant vibration, transmitted over the pulleys by the ropes and instigated by the body tone and movements. Gross movement is not referred to, but a constant fine vibratory one, such as that produced by boring, with a blunt instrument. In Crile's experience it has never been necessary to bore small holes into the bone to hold the calipers. The pressure on the points must be steady, and any variation of the pull on the ropes means pain, erosion or penetration of the cortex, or all three together. The most important points to be borne in mind are: (1) a short, broad tapering point, (2) the prevention of very slight joggling, (3) application to the hard portion of the bone, (4) low leverage (short handle ends not diverging too much), and (5) check appliances. There are several kinds of cheek appliances in use, the purpose of which is to check penetration by putting a stop between the handle ends of the calipers to prevent the points coming too close. This, however, does not prevent the one point from penetrating when the other is pushed away from the bone and slips. Crile finds more satisfactory a screw locking both approximation and spreading. The question of corrosion of points does not apply to short heavy ones, which could not in many months corrode enough to do harm. The disadvantages in the use of the caliper are, Crile thinks, vastly outweighed by the improvement in length, early union, good position and clearing up of sepsis, decreased number of cases of acute medullary osteomyelitis, stiffness and stiff ankles, and pressure paralysis of the external popliteal nerve. The drawbacks that cannot be avoided otherwise have been met by designing a caliper permitting the pull to be taken from the sides and allowing the knee to be fully extended. It has, how-

ever, the objection of being more expensive. Crile describes the method of applying the calipers which he has found most satisfactory. The fracture itself is an important factor in deciding the point of application, and much may depend on the direction of the pull. The rule is to pull in the direction of the long axis of the bone, except in dully considered exceptional cases. The amount of pull will vary according to the amount of shortening to be overcome, the strength of the muscles, the age and site of the fracture, the amount of swelling and tensesness of the deep fascia, and the degree of the infection. "It is my custom to apply 15 pounds directly. If this promises, after twenty-four hours, to stretch the fractures sufficiently, it is enough. If it seems not to perform its functions, which can be from 1-4 to two inches per day, it is increased to 20 pounds, which is sufficient to stretch almost any fractures full length, provided the apparatus is correct. One need not hesitate to use 25 pounds, or even 30 pounds for a few days, and often forcible reduction under an anesthetic may be resorted to. If the extra weight causes periosteal pain, it can be reduced. One finds that 10 pounds is the least that avails fully, although others can get results with only five pounds, I am told. However, one aims to get a little overlength inside a week and thereafter to hold this gain by tie-on fixed extension, which in reality takes very little pull once overlength is accomplished." The caliper will probably cause some discomfort the first forty-eight hours and perhaps at a later period. Relief can often be given by a little local anesthetic applied near the point if the caliper, such as a pinch of powdered procain on the dressing. Or a temporary reduction of the weight, if it

can be done without slipping, will help. The method is applicable to bones other than the femur, such as the tibia, fibula and humerus, and others have had success in these cases. The illustrations are useful in making clear the description of the method.

URETERAL CALCULUS

E. M. E. Sundelof, Fall River, Mass. (Journal A. M. A., March 15, 1919), reports, a case with typical symptoms of ureteral calculus demonstrated by two roentgen examinations, seven months apart, and located below the brim of the pelvis. There were no stones in the kidneys, and operation failed to reveal the stone in the position indicated by the roentgen ray. The hydroephrotic right kidney, corresponding to the ureter with the stone, was removed, and the calculus was found within it. It had evidently rested on a stricture in the ureter. The patient died of surgical shock. The change of place of the stone was probably due to the Trendelenburg position in which he had been placed to free the pelvis of the intestine.

HOSPITAL MESS MANAGEMENT

R. G. Hoskins, Washington, D. C. (Journal A. M. A., March 15, 1919), gives the important features of the mess management in a military hospital. In the civil hospital the principal care is to make things as pleasant as possible under the circumstances, but in the military hospital the chief consideration is to get the patient as soon as possible in a normal condition and out of the hospital. Though no violation of humanitarian principles would be justified, efficiency and not a

haven of peace and rest is the goal. The details of mess management in military hospitals are given too fully to be briefly abstracted without the risk of exaggerating or slighting some points. The full text will be useful for reference. Recently dietitians have come to play a large part in this work and have materially improved conditions. In spite of their lack of definite military status, their usefulness has been demonstrated.

INFLUENZA PNEUMONIA

C. W. Ross and E. J. Hund (San Francisco), Mare Island, Calif. (Journal A. M. A., March 1, 1919), report their experience with the treatment of influenza pneumonia by the transfusion of citrated immune blood. The clinical course of influenza indicates an extremely virulent intoxicant, acting mainly on the nervous system, as shown by the prostration and apathy, the disturbed heat mechanism, the gastro-intestinal disturbance of central type with peripheral sensory symptoms, vasomotor disturbance without evidence of myocardiac insufficiency and depression of the respiratory centers. The bacterial or other origin of the intoxicant is uncertain, but the vasoparesis it produces appears early, as shown by the slow, low tension pulse, early congestive cyanosis, visceral congestion, nasal and intestinal hemorrhages with good status of the heart muscle. Associated with this vasoparesis there undoubtedly coexists a circulatory inflammatory intoxicant, as is well shown by the destructive type of leukopenia. Secondary infection by well-known organisms is favored, and some cases progress to pneumonia, from which some may recover without treatment. Hence it is fair to assume, the authors say, that recovery depends on the presence of natural



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protective elements in the circulation, and the logical treatment, therefore, would be to attempt to neutralize the intoxicant, correct the vasoparesis and prevent the blood destruction with its leukopenia. From the observation of the pneumonia cases, the authors found that when once started the process is apt to take on a fulminant progressive character, hence the theoretical value of transfusion, especially of blood from cases that have been rendered immune by recovery. The blood of donor and recipient should be carefully matched, and syphilis be guarded against, not only by the Wassermann test, but by close clinical observation. Poorly matched blood may have had consequences, and incompatibility is very common, requiring careful selection of donors. A table is given showing the tests for incompatibility, following the technic of Kolmar, and also a detailed method of transfusion. Many of the patients were delirious and direct transfusion was impossible, and, therefore, they were forced to use the citrate method and to devise a closed apparatus for it, which is illustrated and described. The dose of blood varies according to the amount the patient can tolerate, but with relaxed vessels and fair condition of the heart relatively large amounts can be used in most cases. The authors used from 250 to 500 c.c. in their cases, preferably the larger amount. The strength of the citrate solution also varies with the dose of blood; the larger the dose of blood the smaller should be the volume and greater the strength of the citrate solution, so as not to introduce too large an amount of fluid. "One per cent. solution of sodium citrate in physiologic sodium chlorid solution will citrate an equal amount of blood. A 2 per cent. solution in physiologic sodium chlorid so-

lution will citrate two volumes of blood, etc. We use a one per cent. solution for a dose up to 150 c.c.; a 2 per cent. for a dose up to 300 c.c.; a 3 per cent. for a dose up to 400 c.c., and a 4 per cent. for a dose up to 500 c.c. of blood." Charts and brief histories of the cases in which transfusion was performed in one of the units are included in the paper, and show the good results of the method. The procedure, the authors claim, is simple and safe, but they find that it is of no avail if the reserve powers of nature have been allowed to become too far impaired.


SCHISTOSOMIASIS

J. J. Short, New York, reports a case of schistosomiasis, giving what is known of the natural history of the schistosome, and describing the general pathology and symptoms of the disease, in *The Journal A. M. A.*, March 1, 1919. The patient was a Russian Jew, who had spent about two years in Egypt and Palestine and had worked in the irrigation ditches, thus exposing himself to the invasion of the parasite. The case improved under treatment, which was necessarily symptomatic. The disease is essentially a chronic cystitis, which explains the dubious prognosis in these cases. The ova were microscopically recognized, being abundant in the urine.

MITRAL STENOSIS

M. A. Rothschild (New York), Camp Devens, Ayer, Mass., (*Journal A. M. A.*, March 1, 1919, says that mitral stenosis has not been generally regarded as a common valvular lesion, but in an examination of 25,813 soldiers it was found in 0.56 per cent. compared with 0.43 per cent. of mitral

regurgitation. Its definite recognition is based on the presence of a presystolic or diastolic apical murmur, with or without other classical signs or symptoms. The characteristic type of heart action is of paramount importance. In well-marked cases with hypertrophy, the almost ringing first sound, and the accentuated second pulmonary, with small pulse and other symptoms, the diagnosis is simple. But there are other cases with no symptoms and no cardiac hypertrophy, which require careful study, and the presystolic murmur is the basis of the diagnosis. They have examined the relationship of acute articular rheumatism to the lesion, and found it in the history of only 40 per cent. of the cases. The early cases require very careful examination, as the murmur is variable. There is a group of cases, which, for want of a better name, he calls "feeling cases" of mitral stenosis, in which there is no definite stenotic murmur, but a peculiar ringing or split first sound, and an accentuated pulmonary second. In this group, amyl nitrite inhalation is of service. The presence or absence of a thrill is of little value, on account of the danger of confusion with the systolic thrill of the neurocirculatory asthenia complex from which the condition must be differentiated. Ocular pupillary pressure, with the patient in the reclining posture, is of value here, and the lack of subjective complaints in these cases is of interest. If we could follow a small group through a number of years, it would better our scanty knowledge of these earlier stages.



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(3072)

HYSTERICAL APHONIA

Charlest Wolf (New York), and E. G. Breeding (Baltimore), Takoma Park, D. C. (Journal A. M. A., March 1, 1919), report a case illustrating the difficulties of diagnosis in this disorder. Acute and chronic laryngitis, laryngeal tuberculosis, new growths and interstitial neuritis of the recurrent laryngeal nerve of syphilitic origin, all had to be excluded, and the restoration of the voice after an anesthetic cleared up the case.

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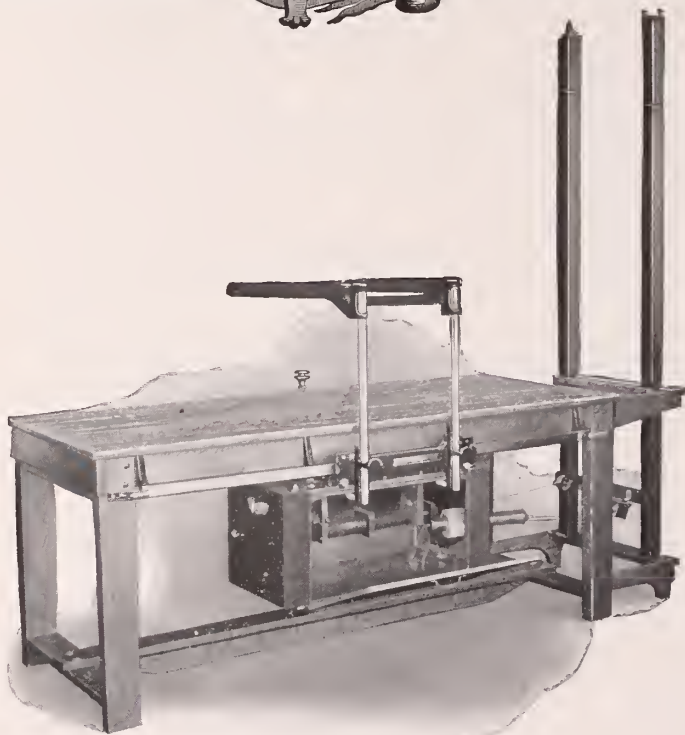
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EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

THE DISTRICT AND COUNTY SOCIETIES URGED TO MEET AND RESUME REGULAR MEETINGS.

Now that normal conditions are rapidly approaching we urge an immediate resumption of regular meetings by our District and County Societies. We understand that the Councilors are arranging to call meetings of the District Societies at an early date for the purpose of reorganization where necessary. The President-elect, Dr. E. W. Pressley, desires it known that he stands ready to visit every District Society during his term of office and as many of the County Societies as possible.

The Spartanburg meeting of the House of Delegates in 1917 adopted a resolution to the effect that the Vice-

Presidents of the Association would be expected to visit the County and District Societies and take an active part in the organization work of the Association following the plan of the New Jersey State Medical Association which has been so successful along this line. The names of the Vice-Presidents are: Dr. C. A. Mebley, Rock Hill; Dr. L. C. Shecut, Orangeburg; Dr. H. D. Smith, Florence. The Secretary-Editor of course stands ready to lend every assistance in his power.

ABBEVILLE COUNTY MEMORIAL HOSPITAL.

We believe Abbeville County to be the first in the State to erect a Memorial Hospital to her sons who gave their lives to the cause of liberty in the world war. The Journal has long ad-

vocated County Hospitals in every County in South Carolina where at all practicable and many Counties now have such Hospitals or are contemplating building them. We have been so much interested in the matter that we wired Dr. G. A. Neuffer of Abbeville, one of the most active members of our State Association and only recently our President, to give us a brief report on the proposition in order that we might give it to our readers immediately for their information and encouragement along these lines. The report is as follows:

Abbeville County Memorial Hospital

The idea of a memorial to the men of Abbeville County who participated in the world war has been in the mind of the people of Abbeville County ever since the armistice was signed.

There have been various suggestions as to what would be the most appropriate memorial. It was suggested that a monument be erected on the Public Square; but monuments are so numerous now it was felt that this would not be sufficient evidence of our appreciation of the services rendered by our boys. In considering the matter Dr. J. C. Hill, conceived the idea of a memorial hospital, this being a memorial, as well as supplying a much needed institution, which will be of great service to the people of the county as well as a constant reminder of our soldier boys.

There is, in this city, a three story brick building, which has been used as a college: this property was on the market for sale. Dr. J. C. Hill and Mr. S. H. Rosenberg, secured an option on the building for the purpose of establishing a hospital. They then interested the following gentlemen: Drs. C. C. Gambrell, J. R. Power, G. A. Neuffer, J. E. Pressly, Mr. D. H. Hill and Mr. C. H. McMurray, these

eight men guaranteeing the purchase price of the property.

It was decided to form a stock company, with a capital of \$10,000 and after a short canvass this amount has been secured. The property has now been bought, a commission secured and in the next few days the company will be finally organized.

Plans for remodeling the building and converting it into a modern and up-to-date hospital are now under way and it is intended to have it in running order in a very short time.

PAYMENT OF DUES BY MEMBERS IN ARREARS.

A considerable number of members of the State Association have not yet paid their dues and therefore, it will be necessary to stop the Journal and report to the American Medical Association the suspension of membership. We urge therefore, that dues be sent immediately to the Secretaries of the County Societies and in counties where societies have suspended work the dues may be sent direct to the Secretary of the State Medical Association.

MEDICAL VETERANS OF THE WORLD WAR.

We are in receipt of a letter from Dr. Kenneth M. Lynch of the Medical College at Charleston urging all of the Medical men in the State to apply on the proper blanks which have been sent to him as former Medical Aide to the Governor, for membership in the organization now in course of formation: The Medical Veterans of the World War. Dr. Lynch suggests that some members of Draft Boards may think they should not belong to such an organization, but calls attention to the fact that they were performing an important duty in connec-

tion with the war and, therefore, directly connected with the war department. The first meeting will be held during the American Medical Associa-

tion meeting, Atlantic City, probably June 13th and it is desired that these applications be sent in before that time.

ORIGINAL ARTICLES

SOME RESULTS OF INFLUENZA WITH SPECIAL REFERENCE TO EYE, EAR, NOSE AND TROAT DISEASES.

By Leland O. Mauldin, M. D., Greenville, S. C.

Mr Chairman and Fellow Members of the South Carolina Medical Association:

INFLUENZA has so effectively invaded every specialty of medicine and surgery and swept the country with such disastrous results as to cause every doctor to give it and its complications most serious attention.

In view of this fact, it behooves us to exchange ideas and to relate individual experiences concerning this disease and to use every reasonable endeavor to throw light upon its cause, course, treatment and results.

I have had to contend with quite an interesting variety of complications and results insofar as they pertained to eye, ear, nose and throat, diseases that I feel it a duty to report some of them to you today.

Early in the fall of Nineteen Hundred and Eighteen, before the epidemic of influenza had become widespread, in fact, before we realized in my locality that we had an epidemic, I removed the tonsils of a young man twenty-seven years old under general anaes-

thesure. He got along nicely and left the hospital the following day. His temperature remained normal for three days whereupon on the afternoon of the third day his temperature went to 102 F., he showed a tendency to frequent cough and complained of a pain in his trachea low down. He was slightly constipated, so I gave him a laxative thinking that when this acted well he would be better. The next morning the medicine had acted but the temperature was still about the same as the afternoon before, the patient felt depressed and was sneezing frequently. On account of the danger of jarring the throat and causing hemorrhage by this sneezing I advised him to restrain the sneezing as much as possible, but in spite of restrain the sneeze would come and finally bleeding from one fossa did appear. The sneezing finally stopped but the patient had bled about a pint. To stop the bleeding I cleaned the clot from the fossa where it had accumulated and applied a solution of adrenalin chloride and some fifteen minutes afterwards applied some coagulen ciba. No more hemorrhage occurred. A peculiar coincidence happened. In his effort to restrain his sneezing he would keep his mouth closed and when the sneeze came it seemed to give great jar to the soft palate and there was, as a consequence of this, an infiltration of blood through the soft palate to the extent of turning this tissue black

Read before the South Carolina Medical Association, Florence, S. C., April 16, 1919.

which was three or four weeks in returning to its usual healthy color.

A sad coincident in this case is that the patient's wife, who was an asthmatic and pregnant, took the influenza and died in three days.

The patient went on and got well, but his throat was three or four weeks in getting well, which is an unusual length of time to recover from a tonsillectomy.

By this time I had realized that we were in the midst of a serious epidemic, and I discontinued all operations, except emergencies, until the epidemic subsided.

The second case I wish to speak of is that of a patient, I was called to a nearby town to see in consultation.

The patient was a male forty-four years old taken with influenza two weeks before, was almost too weak to talk, looked toxic, had a purplish cyanotic cast of lips and skin, morning fever of two degrees and evening of three, for past two or three days before that, had been about fever free, there was profound prostration, the patient was very nervous, but lay stupor-like as though he might fall into a coma and die from toxæmia. He had a hacking cough at times which seemed to be from an irritation in the throat about the larynx.

Pulse and respiration were commensurate with his temperature. The lungs were absolutely clear of any pneumonia, the fossæ were clear, the throat showed tenaceous mucus extending into the larynx, the left ear was clear, but the right showed middle ear inflammation with bulging drum, intense pain and extreme tenderness over the mastoid on this side. Under local anesthesia I did a paracentesis with free incision and got abundant drainage which lasted about seven days.

From the time of this paracentesis,

day by day the mastoid showed a gradual clearing up, temperature gradually subsided and patient gradually gained in health and strength, and in one month came to my office, twelve miles distance, apparently well, with good hearing and no disturbance in the ear or mastoid bone. A striking thing in this, as well as in many other similar cases I saw during the influenza epidemic is the rapidity with which the diseased mastoid underwent restoration when free drainage was established through the middle ear.

Under general principles of surgery, if this patient had been able to stand an operation for mastoiditis I would have suggested a radical mastoid operation at the time I first saw him. I have seen a very similar circumstance to this, occur in more than a dozen cases as a complication of influenza and have come to the conclusion that when the acute stage of influenza is on, if we have an acute otitis media with mastoid involvement, the best thing to do is to give all the drainage possible from the middle ear, by a free incision at the seat of election in the drum, and keep the drainage cleaned out so that the products of inflammation may have easy access through the external auditory meatus. You can generally relieve the patient temporarily this way, and if not permanently you give him time to get in better shape to withstand the mastoid operation later, for every day distant from an influenza attack strengthens one's ability to stand an operation.

Looking back through that fateful epidemic, I recall more than a dozen cases of acute otitis media with almost unbearable pain in the ear and extreme tenderness over the mastoid, and showing many of the other classical symptoms of mastoiditis which got well by virtue of a timely paracentesis and the establishment of free drain-

age through the drum into the external auditory canal.

All have gotten well with a re-established normal hearing, except one who kept up a discharge and some tenderness and had some dizziness. On him I did the radical mastoid operation and he has about recovered from that.

One more interesting middle ear case, was that of a girl about sixteen years old, who had acute otitis media following influenza, and who seemed to menstruate through her ears. Her menstruations had previously been regular and through regular channel, but at this time, in the presence of this disease she seems to have a vicarious menstruation. I did not see the discharge of blood, but I saw the middle ear inflammation afterward, and her family physician gave evidence of several ounces of blood having been passed from each ear a few days before, extending over a period of about seventy hours.

Coincident with the influenza there appeared numerous cases of epistaxis. Most of the cases that I saw occurred among young people. It was so severe in some as to present an alarming aspect. All the cases that I saw showed, on close examination, that the bleeding was from the artery on the septum of the nose, yet the mucous membrane in the nose generally showed a great tendency to bleed, especially if slight abrasions happened. Some I treated and controlled by application of cotton saturated with a solution of adrenalin chloride, some I packed the nostril with sterile gauze soaked in liquid petroleum, and some I cauterized with trichloroacetic acid after cocaineizing.

The fact that there was so much hemorrhage associated with the influenza, led me to believe that there is a microorganism associated with or the cause of the disease, that lowers the coagulability of the blood in the indi-

vidual affected. From the profound prostration produced by the disease in such a short time, I am sure that it not only lowered coagulability for the time being, but has disintegrated or destroyed the nutritive elements of blood. I believe that there is some strain of the streptococcus connected with this disease (possibly the streptococcus haemolyticus or some kindred organism, and whatever strain or whatever organism it is, it has been an ever active factor in the destruction wrought by influenza.

An interesting Sinus case: Last November, during the epidemic I was called to another town in consultation, over a girl seventeen years old. She, with other members of her family, took influenza the week before. About the fourth day of the malady the other members of the family began to get better, but this young lady got worse, and the left side of her head and face began to swell with considerable pain all through the region of the fifth nerve, and by the seventh day her head and face had assumed such proportions that her features could not be recognized by her most intimate acquaintances, the left portion of her frontal bone seemed far in advance of her right, the lids on this side were completely swollen over the eye, so that the eye could not be opened by any known means and the cheek on this side was swollen until the skin was real tight. The nasal drainage was fairly good and seemed about normal. There seemed to be a periorbitis on this side of the head originating, possibly, in the nasal accessory sinuses and extending into the periorbitum of the adjacent bone. The patient was very weak, and on account of the immense swelling was unable to open the mouth to eat, but could manage to take a little liquid diet through a quill. She seemed too weak for any

operative procedure at the time. So palliative measures, in the shape of ichthyol applications to the face, and internal medicine to relieve the pain and to keep secretions right, were used with the hope of patient getting in better shape, to come to my office for a diagnosis, and an operation if necessary.

The patient did get better, and in about one month came to my office apparently strong, but still had swelling in left part of forehead over the frontal sinus, and there was a discharge from this sinus through a fistulous track extending from the sinus through the outer half of the upper lid. There seemed to be a large mucocele in this left frontal sinus. Trans-illumination and other symptoms showed a clear antrum, clear ethmoids, but a chronic frontal sinus discharging through the fistulous opening in the upper lid. No X-ray picture was taken, but I knew this left frontal sinus had to be opened up and advised same. The patient went to hospital and under general anaesthesia I opened this sinus from the outside making incision through the eyebrow. I found the periosteum intact, but the whole interior bony wall of this sinus had broken down, and I removed three shell-like pieces of bone, and cleaned a large mucocele from the sinus, stitched up the periosteum and then the superficial tissue, put a wick gauze through the fistulous opening in the upper lid and after three days dressed it every day for a week when the patient went home nearly well and I am told that the swelling has gradually gone from the left forehead.

Some eye cases I have found very interesting, one of which I will mention. Last summer I examined the eyes of a boy about fifteen years old and found his vision nearly normal and the ophthalmoscopic appearance

of both eyes were normal. There was a latent astigmatism corrected by plus .25 Cyl. Ax. Vert. each eye. In the fall this same patient had influenza and in recovering from the disease he found that he could not see with his left eye. It was in this shape that he came to my office and on ophthalmoscopic examination I found that he had an optic neuritis of this eye and some retinitis and some haemorrhagic opacities in the vitreous. Under increasing doses of iodide of potash pushed to saturation the vision has gradually cleared up in this eye until now it is 20 to 100. The optic nerve has cleared up of its inflammation but the disc is pale and shows signs of considerable atrophy.

I have seen three cases of vitreous opacities following influenza and due to intraocular haemorrhage.

The next case I wish to report is one in which I was called in haste by the attending physician, saying that a tracheotomy was probably necessary. I went about seven miles distance into the country and found a family of eight, all down in bed with influenza except one, the mother. The case I was called to see was a young lady in this family seventeen years old, who had been sick about five days and at this time was laboring for breath, she had fever, rapid pulse, anxious expression, cyanosis, and tugging at the trachea and showing every aspect of laryngeal obstruction. I advised intubation with my largest tube and if this failed I promised tracheotomy.

I introduced into the larynx my largest sized tube and the breathing seemed better for a very short while whereupon the patient showed difficulty again in breathing and in one exertive motion gave a tremendous cough and expectorated tube and a large amount (about an ounce) of thick gummy mucus which was very

tenaceous. This mucus could be drawn out into long strings. Having gotten rid of the mucus, the breathing calmed down to normal and the patient cleared up to a happy restful condition within a few minutes. An examination of the tube showed that its lumen was also filled with this thick tenaceous mucus. My analysis of the cause of the cough that expelled the tube was, that when the lumen of the tube became stopped the patient had to do this in a supreme effort to get air. This patient after this made an uneventful recovery. I have heard of a few patients with influenza dying with this labored breathing, and while many, no doubt, died with pulmonary oedema in which the lung gradually filled with fluid, I am convinced that some have died from laryngeal and tracheal obstruction caused by thick tenaceous mucus.

Gentlemen I have records of numerous other cases of unmistakable results of influenza, but the foregoing are typical and stand out most prominently in my memory and I present them to you for what they are worth.

THE VALUE OF BIOLOGIC PRINCIPLES IN SURGICAL PRACTICE*

J. Shelton Horsley, M. D., Richmond, Va.

IT cannot be too often emphasized that surgery should be more a science than an art. A surgeon who is a dexterous operator and who skillfully amputates a leg that with patience and scientific application could be saved is merely a good artisan, and is distinctly inferior to the surgeon who could save the leg even though he should be a bungling operator. The ideal is to be thoroughly imbued with the principles of the biologic sciences, thought-

fully to apply these principles, and at the same time to be mechanically skillful.

The science of anatomy is essential to the mechanics of surgery. He would be a poor locomotive mechanic who did not understand the construction of his engine; and in operation on the neck, for instance, a surgeon who is ignorant of anatomy would be like the proverbial bull in a china shop. A knowledge of anatomy is essential to good surgery, but in the ever shifting problems of tissue repair and metabolism, physiology is just as necessary. The principles underlying an operation are correct only if they conform to the laws of physiology and of repair of the tissue or organ that is affected. If we could get away from blindly following what some one says merely because he says it, and do things because of reasons that have sound biologic foundations, we should undoubtedly do work more satisfactory to our patients and to ourselves.

Hyperemia

Let us take an illustration from the practical work of a surgeon and see how thoughtful application of physiologic principles would have rendered a problem that appeared difficult more easy to solve: Hyperemia is connected in any way or another with all surgical questions, whether they concern treatment of inflammation or repair of a wound. It has long been known that blood is an enemy of the tubercle bacillus, and that obtaining a good supply of healthy blood is the only method of combating tuberculosis. About two decades ago when a patient with tuberculous peritonitis and ascites sought surgical treatment he might have been subjected to one of several procedures: One surgeon would have advised opening the abdomen and letting the sunlight in. Another

thought it was best to dust the intestine with some special powder. Still another believed in drainage with a single tube, others with multiple tubes. All these methods seemed more or less satisfactory results. Each surgeon, seeing his patient recover after using his own method, earnestly thought that this was the only correct procedure. The situation resembled very much that described in a poem in an old school reader in which four blind men went to see an elephant. One fell against its side and thought the elephant was like a wall; another embraced its leg and declared it resembled a tree; the third grasped its tail and said the animal was constructed like a rope, and the last felt its tusks and concluded that the elephant was very like a spear. The moral was that though each was partly in the right they all were in the wrong. So all these surgeons who were using different methods were unconsciously working on a principle that produced hyperemia, and it was this hyperemia, induced partly by draining off the fluid and so relieving pressure and partly by handling the intestine, that cured the tuberculosis. It was many years, however, before this fact was acknowledged by the various partisans.

The surgical treatment of slow or threatened gangrene has also been much discussed. Carrel and Guthrie,¹ after two experiments, concluded that the blood circulation in the leg of a dog could be completely reversed within six hours. They severed the femoral artery and vein just below Poupert's ligament and united by suture the cardiac end of the artery to the distal end of the vein, and the distal end of the artery to the cardiac end of the vein. After a few hours, when red blood was seen returning, they assumed that the circulation was reversed. I think it can now be stated,

however, that it is impossible to reverse the circulation in this manner. In a series of experiments which have been reported elsewhere,² we have shown that when the severed femoral artery and vein of animals are sutured together in a reversed direction there is no real reversal of the circulation, and the arterial blood never goes more than a short distance below the knee and is then quickly switched back to the iliac veins through the dilated collateral vessels. Evidently what happened in Carrel's experiments was that dissection paralyzed the vasoconstrictor nerves, and the dilated capillaries permitted red arterial blood to flow through unchanged. When the sciatic and crural nerves are divided in a dog, red blood appears in the femoral vein because of the extreme dilatation of the capillaries. Clinically this is often seen to follow an application of the elastic tourniquet which, if left on for even a short time and removed, produces an intense flushing of the limb until the temporarily paralyzed vasoconstrictors have resumed their function. Many useless operations have been done attempting so-called reversal of the circulation in threatened gangrene. The only good accomplished was damming back the venous blood and forcing the small amount of arterial blood that reached the tissues to stay longer than it normally would so deliver to the tissues more nutrition than would be possible when the arterial blood was quickly drained off by unobstructed veins. This can be very simply effected by ligating the femoral vein.

Surgery of Gastro-Intestinal Tract

Surgery of the gastro-intestinal tract suffers from the lack of application of physiologic principles. Take, for example, the popular operation of gastro-enterostomy. It does relieve the symp-

toms of many patients with duodenal or gastric ulcer. The unfortunate minority, however, that we would like to forget still have their symptoms, and restoration of the normal channels by undoing a gastro-enterostomy is an operation not infrequently performed. The cases that are cured by gastro-enterostomy have never been fully explained. Some say it is a drainage operation, and yet in draining other hollow viscera we do not open at the lowest point. We drain the gallbladder and the urinary bladder from the part opposite the most dependent portion, and we do an enterostomy in the distended loop of bowel that is nearest the incision, because we know that normal contraction or peristalsis will keep the bladder or bowel empty if an opening is made. By some it is claimed that gastro-enterostomy cures because the acidity of the gastric juice is lessened, and still others assert that by short circuiting the course of food, rest is given the ulcer; yet roentgenoscopy reveals that unless the pylorus is closed a considerable portion of food continues to go by this route, and no pyloric closure seems to be permanent unless a resection is made.

Peristalsis

Recent physiologic research by Cannon and Washburn,³ which has been confirmed by Carlson and others, has demonstrated that the hunger pains, or so-called pangs of hunger, in a normal stomach are due to excessive peristaltic contractions of the stomach. It has also been shown that the pains that come on with clocklike regularity after meals in duodenal or gastric ulcer are not produced by acid erosion of the ulcer by the hyperacid gastric juice, as was formerly taught, but are due to contraction of peristalsis on gastric nerves made sensitive by the inflammation of the ulcer. The character

of the gastric juice has nothing to do with the pain except so far as it excites an abnormal amount of peristalsis. Food or sodium bicarbonate lessens peristalsis for a while and so relieves pain. Recent investigation seems to show that the stomach has a limited supply of nerves that conduct pain,⁵ and these nerves, which are deep in the stomach wall, are made more sensitive than normal by the inflammation around an ulcer. Consequently, they register impulses of pain from the pressure of peristalsis that in a normal physiologic condition they would not register.⁶ It is probable that gastro-enterostomy relieves pain by facilitating the emptying of the stomach and so lessening peristalsis. This, however, is largely the treatment of a symptom and not an effort to remove a pathologic condition and to restore tissues to their physiologic state.

In surgery of the intestine, the work of Cannon and Murphy in their studies of peristalsis after resection of the bowel has not received proper attention. Lateral anastomosis is still the method employed by many surgeons though, as shown by Cannon and Murphy,⁷ peristalsis is practically abolished in the region of such an anastomosis. Food can be pushed through only when a column of it extends into a proximal (oral) loop where peristalsis is unimpaired. Postmortems in dogs with lateral anastomosis showed that there was always an accumulation of food at the site of the lateral anastomosis even when the rest of the intestinal tract was free, because severing the circular fibers, in this operation, abolished peristalsis, and the blind pouches could not be completely emptied. They found that in an end-to-end union there was not the slightest stasis of intestinal contents at the site of operation. Merely because the lateral union usually gives no dis-

agreeable symptoms, its use has been continued. If the patient did not die it was assumed that he had sufficiently recovered. With attention to the triangular mesenteric spaces and careful closure of these and of other raw surfaces before the bowel is opened, together with disinfection of the bowel ends after opening, as good technical results are obtained in end-to-end union as after the lateral method, with the advantage of securing normal peristalsis and normal emptying.

Surgical Drainage

One of the common problems in surgery, and a most interesting one, is surgical drainage. This question has revolved around the mechanics of drainage and what material to use, as well as when to drain; but the manner in which drainage acts has been largely disregarded. In surgical drainage, mechanical measures that are followed by fortunate results would appear ridiculous when no biologic problems exist. In preventing infection of a raw surface while draining a deep abscess, gauze is often placed over the raw surface. If we could convert this into a mechanical proposition and imagine that the pus was a solution of methylene blue and that it was flowing over this raw surface which had been covered with absorbent gauze to prevent contamination, we know that both the gauze and the wound would be deeply stained. However, this method of protection does act in a beneficial manner, and a wound is often by this means kept from septic infection. The drainage of a peritoneal abscess is practically always up hill, and is usually successful. If mechanics were the only principle, how could an appendiceal abscess ever be drained by putting a tube down to it through an abdominal incision? The whole method of drainage really depends on

a reversal of the circulation in the local lymphatics and is chiefly a biologic process. It is nature's effort to extrude a foreign substance.

If a boy sticks a splinter into his toe and mild infection occurs, the sore "runs" seropus for many days. Finally, the splinter "works" to the surface and is removed. The next day drainage stops and the wound rapidly heals. The splinter has been washed to the surface by the reversal lymph current in an effort to extrude the foreign substance. After the splinter has been removed there is no stimulus for any further extrusion, the lymph current resumes its normal direction, and the wound closes.

In drainage of the abdominal cavity, where there is an enormous lymph space and where lymph is abundantly poured out, the effort to extrude a foreign body, which in this case would be a drainage tube, causes an immense flow of lymph that carries through the tube much of the septic products that would otherwise have been absorbed. Drainage, then, prevents positive pressure in the suppurating cavity and at the same time has the equally important function of being a stimulus for a reversal of the lymphatic circulation. When a wound is packed with gauze, the gauze acts as a foreign body; and instead of the wound absorbing the pus with which the gauze is saturated, the tendency is for the lymphatic circulation to be reversed, and for lymph to be poured out into the gauze in an effort to wash it away. Portions of the body in which the lymphatic supply is not so abundant as in the abdomen will require dependent drainage because there is not enough lymph constantly to flush out the septic cavity, and gravity must aid. The beneficial action of the cigarette drain, which is clogged with coagulated lymph in a few hours, becomes compre-

hensible when we view it as an exciting cause for reversal of the lymph circulation.

Neurologic and Bone Surgery

There are many problems in neurologic surgery which require some knowledge of physiologic principles in order to be settled satisfactorily. Spiller and Prazier have demonstrated that section of the posterior sensory root of the gasserian ganglion produces what is called "physiologic extirpation" of the gasserian ganglion. It has been known for years that a nerve which is injured on the central side of its ganglionic cells does not regenerate; yet when the operation of division of the posterior sensory root for *tie douloureux* was suggested, it was received with some skepticism. This operation is safer than surgical extirpation of the gasserian ganglion, and is followed by less trophic disturbance.⁸ The plugging of foramina in the skull from which neuralgic sensory nerves have been removed in order to prevent regrowth of the nerves has sometimes been done with metal screws. Because an iron screw can stop a hole in a piece of wood is not necessarily a reason why it should be employed in living tissue. On the other hand, some substance that does not cause reaction in bone is preferable. What happens after an iron screw is applied? Nature in an effort to extrude the irritating foreign substance removes lime salts in its neighborhood, the bone softens, the screw becomes loose, and the nerve can grow around it.

The fashion for plating fractures fortunately is on the decline. Hundreds and probably thousands of fractures have been plated with heavy metal plates for no reason except that it appeals to the mechanical sense and because some eminent surgeons advo-

cated this operation. In many cases it is followed by attempted extrusion of the plate and, like the splinter in the boy's toe, the plate has to be removed. To the casual observer it seems strange that permanent union does not always occur when a nice cabinet joint is made between the ends of a fracture bone and the ends are held securely in position by steel plates and screws. The same process goes on here as when an effort is made to plug a foramen in the bone with iron. The iron is an irritating foreign substance, and in order to extrude it, nature causes an absorption of the lime salts. As a result, a screw which may at first be firmly fixed in the bone soon becomes loose. But more important is the fact that osteoporosis is induced in this effort at extrusion, and callus formation is thereby prevented or retarded. A poorly fixed fracture without the use of metal is more likely to give eventual good results than the neatest union by means of heavy plates and screws.

Effect of Emotions

That emotions have considerable bearing on the prognosis in certain cases of surgery has long been accepted. Cannon⁹ has demonstrated that fright or profound anxiety causes a stimulation first of the sympathetics and then of the suprarenals. The action of epinephrin amounts to a prolonged stimulation of the sympathetic nervous system. Thus the body is put on what may be called a war basis, the circulation is more active, the heart beats faster, the pupils are dilated, respiration is accelerated, and metabolism generally is increased. Often there is so much glycogen released from the liver as to cause marked glycosuria, especially if the body is at rest; but if the emotions are accompanied by physical action, as fighting or running, this excessive amount of

sugar may be consumed. The moral is that in some surgical cases it undoubtedly makes the prognosis better if emotions of fear or anxiety are allayed as much as possible. In diseases such as exophthalmic goiter, measures that abolish or diminish fear or excitement are of the greatest importance.

Transplantation of Organs

Skin grafting and transplantation of organs or tissues are dependent on biologic laws. Surgeons who have had great experience in this type of work, such as Lexer¹⁰ and Davis, believe that skin grafts from others than the patient are practically never permanent. They either melt away at once or, if they appear to "take" are later absorbed and replaced by connective tissue. It has been suggested that tests, as for transfusion of blood, would be of benefit in selecting a donor for skin grafting; but so far this has not been put to any extensive practice. The transplantation of highly developed organs, such as a kidney, from one animal to another, even if of the same species, is always a failure. The kidney may functionate for a while, but the fine biologic difference in the body fluids of the donor and the recipient cause degeneration, and the kidney eventually becomes a mass of connective tissue. This has been acknowledged by Carrel, Guthrie and others who were at one time enthusiastic about the success of such a procedure. The reconstruction of channels, as the bile ducts, from tissues that have no immunity to the irritating discharges with which they must come in contact is also unwise. Operations in which strips of fascia, pieces of vein,¹¹ and other tissue unaccustomed to the action of bile are used ultimately result in failure, no matter how skillfully the mechanical part of the operation is done.

Conclusion

These are merely a few instances of what every surgeon sees in his work, and they illustrate the profound influence that the application of biologic principles has on surgical practice. Real progress in surgery lies not so much in cultivating the art of surgery and in striving after mechanical dexterity, which is important but can be acquired in a few years, as in the study of biologic principles that concern function, nutrition, metabolism, and repair of tissues, and in the thoughtful application of these principles to every operation and to every method of surgical treatment.

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1. Carrel, Alexis, and Guthrie, G. C.; *Ann. Surg.* **43**:203-215, 1906.

2. Hosley, J. S., and Whitehead, R. H.; *A Study of Reversal of the Circulation in the Lower Extremity*, *J. A. M. A.* **64**:873-877 (March 13) 1915. Hosley, J. S.; *Reversal of the Circulation in the Lower Extremity*, *Ann. Surg.* **63**: 277-279 (March) 1916.

3. Cannon and Washburn. *An Explanation of Hunger*, *Am. J. Physiol.* **29**: 441, 1912.

4. Carlson, A. J.: *The Control of Hunger in Health and Disease*, University of Chicago Press, 1916, pp. 62-83.

5. Kast and Meltzer: *Med. Rec.* **70**: 1017, 1906. Ritter: *Zentralbl. f. Chir.* **35**: 609, 1908. Langley: *Brain* **26**: 23, 1903.

6. Ginsburg, Harry; Tumpowsky, Isidor, and Hamburger, W. W.: *The Newer Interpretation of the Gastric Pain in Chronic Ulcer*, *J. A. M. A.* **67**: 990-994 (Sept. 30) 1916. Hardt, L. L. J.: *Pain in Active Pathologic Processes in Stomach or Duodenum*, *J. A. M. A.* **70**: 837-839 (March 23) 1918.

7. Cannon and Murphy: *Ann. Surg.* **43**: 519-520.

8. Frazier, C. H.: *A Surgeon's Impression of Trigeminal Neuralgia*, *J. A. M. A.* **70**: 1345-1350 (May 11) 1918.

9. Cannon, W. B.: *Bodily Changes in Pain, Hunger, Fear and Rage*, New York, D. Appleton & Co., 1915, pp. 52-80.

10. Lexer, E.: *Ann. Surg.* **60**: 172-174, 1914.

11. Hosley, J. S.: *Reconstruction of the Common Bile Duct*, *J. A. M. A.* **71**: 1188-1194 (Oct. 12) 1918.

IN MEMORIAM
PIONEER PHYSICIANS OF CHAR-
LESTON, SOUTH CAROLINA,
DURING THE COLON-
IAL PERIOD.

Tipton, Indiana.

By William Lane Lowder, B.S., M. D.

Introduction

Devoted, fell ye PIONEERS, but un-
dying .

The southern zephyrs your names keep
sighing ;

The southland streams murmur of
each names ;

The dim old woods are peopled with
thy fame.

The silent pillar, tall, lone and gray,
Claims kindred with thy sacred clay ;
Thy spirits wreaths the dusky moun-
tains ;

Thy mem'ry sparkles o'er the silv'ry
fountains.

Beth: the meanest rill, the mightiest
river,

Flows mingling with thy Fame for-
ever ;

Despite ev'ry "drawback" thy land
hath borne

That land is Glory's yet, and also,
your'n.

Lenvoy

'Tis a watchword yet, on our Mother
Earth ;—

When man contemplates a deed of
worth,

He, to those Revolutionary heroes
points, then turns to tread,

Thus sanctioned, on the oppressor's
haughty head ;

He trusts to THEM, and on, doth
bravely run,

Where LIFE is LOST, or FREEDOM
WON!

Physicians of the Colonies

The Physician skilled, our wounds to
heal,

Is more than Armies to the public weal.
—Cicero.

William Bull, M.D.

Of the colonial physicians none were
more active or distinguished than
those of South Carolina. In 1734, a
native of this State, William Bull, ob-
tained a degree in medicine, at the
"University of Leyden," and on that
occasion, defended and published an
inaugural dissertation, "De Colica Pie-
tonum." He had studied under Boer-
haave, and seems to have commanded
the respect of his associates. By the
celebrated Van Swieten, he is spoken
of in his commentaries as the VERY
LEARNED W. BULL.

John Moultrie, M.D.

In 1749, John Moultrie received the
degree of "Doctor in Medicine," at
the University of Edinburgh, (Scot-
land) and published a thesis, "De Fe-
bre Flava." He was the first native
Carolinian who obtained this honor at
that University. According to Doctor
Ramsey, ten other native Carolinians
obtained the same honor, between the
years of 1768 and '78. (Ramsey's Re-
view of Medicine in the 18th century.
New York Medical Repository, Vol.
IV, p. 398.) As more particularly dis-
tinguished in this section of the coun-
try, the names of Doctors Lining,
Chalmers and Garden, deserve to be
especially noticed. They were all na-
tives of Scotland, and emigrated in the
earlier part of the century before the
last. Being men of unquestioned abil-
ities, learning and enterprise, they
contributed greatly, both by their in-
fluence and writings, to elevate the
character of the profession.

John Lining, M.D.

To Doctor John Lining, we are indebted for some of the most valuable statical experiments ever published. They were continued throughout the whole of the year 1740. He ascertained his weight in the morning and evening; the weight of the food which he swallowed, and the weight of the urine and alvine excretions ejected. The result of these troublesome experiments was published in 1743, in the Transactions of the Royal Society of London. In 1753 he published "A Description of the American Yellow Fever," in a letter to the celebrated Doctor Robert Wyatt, professor of medicine in the University of Edinburgh. This was the first account of this terrible disorder which had emanated from this continent, and stands to this day unrivalled for the general accuracy and minuteness of its description. (Edinb. Essays and Obs. Vol. II p. 370).

Lionel Chalmers, M.D.

To Doctor Lionel Chalmers we are also indebted for several valuable productions. In the year 1754, he communicated to the "Medical Observations" and "Inquiries of London," a paper on the Opisthotonus and Tetanus. These appear to have been very prevalent, at that time, in Charleston, and Doctor Chalmers seems to have had a large experience in treating them. The remedies which he principally recommended are: bloodletting in the beginning, the warm bath, the free use of opium and emolient enemata. (Vol. I p. 87). In 1768, he published "An Essay on Fevers," in which he enters into an extensive discussion of the theory of febrile diseases, and proposes a new method of treating them. Contrary to the prevalent belief of the time, Doctor Chalmers endeavors to show that the

cause of fever is not to be sought for in the fluids, but in the solids, and he considers the immediate cause to be "a spasmodic constriction of the arteries and other muscular membranes." Whatever can give much pain or stimulate the nerves so as to cause them to excite such constrictions, he thinks may bring on fever. As an inevitable consequence of this spasm and constriction, irregular distribution of blood takes place, producing engorgements of the different viscera, and to this irregular circulation are owing all the phenomena of fever. Spasm of the extreme arteries and irregular distribution of the blood being the leading features of fever, he recommends two indications in the treatment. First, to relax the spasm—second, to relieve the internal fullness of the system; and the two agents which he recommends for accomplishing these purposes, are, viz.: sweating and purging. Such is a very brief account of his theory of fever, which he supports with much talent and learning. The whole work displays a compass of observation, and a power of theoretical discussion, which should have raised its author to a higher rank than he seems to hold in the lists of medical fame. To perfect originality, the theory of Doctor Chalmers can lay no claim, whatever. The doctrine of spasm had been previously suggested by the celebrated Hoffman, from whom, both—Chalmers and Cullen, doubtless borrowed it. Whether Chalmers was at all indebted to Cullen for any of his views on this subject, it is not easy to say, although it seems very improbable, the Essay of Doctor Chalmers having appeared several years before the "First Lines" of Doctor Cullen were presented to the public.

Besides this, Doctor Chalmers was the author of an extensive and valu-

able work on the "Climate and Diseases of South Carolina," in two volumes: "An Account of the Weather and Diseases of South Carolina," by Lieuel Chalmers, Doctor in Medicine, of Charleston, S. C., 2 vols. London, 1776. He also recorded and published an important series of meteorological observations at Charleston, continued for ten years, i. e., 1750 to 1760. A general table of the results of these observations may be seen in his work on Carolina, vol. 1 p. 42.

Alexander Garden, M.D.

Doctor Alexander Garden was another distinguished physician of Charleston at this period. From all the accounts which we have left of him, he appears to have been a man not merely thoroughly versed in his profession, but highly accomplished in literature and general science. He was much devoted to natural history; and the Transactions of the Royal Society contain several of his papers on this department. As a proof of the high estimation in which he was held, it may be mentioned, that Linnaeus, with whom he corresponded in Latin, gave the name of *Gardenia* (in honor of him) to "one of the most beautiful flowering shrubs in the world." He was a member of the Royal Societies of Upsal and of London. The only medical production, that he left, is an account of the anthelmintic properties of the "*Spigelia Marilandica*," together with a botanical description of the plant. (For an interesting account of Doctor Garden, see Ramsay's History of South Carolina, vol. II).

When the Gate's UnBarred

Behind the pinions of the Seraphim,
Whose wings flame out upon the
 swinging spheres,
There's a voice that speaks the num-
 ber'd years

Until that day when all come back to
 Him;
Behind the faces fair of the burning
 Cherubim,
Whose smiles of love are seen thro'
 broken tears,
There's a face that ev'ry creature in-
 ward fears,
The face of filial love no veil may ever
 dim.

O angels of glad laughter and of glor-
 ious song,
Your sweet voices sound so near, the
 garden wall
Can scarcely hide the trees that bend
 and nod:
Unbar the gate for ye have waited long
To show the garden that was made
 for all—
Where all is safe beneath the smile of
 God.

INTERESTING ASPECTS OF THE RECENT EPIDEMIC OF INFLUENZA.

By J. Heyward Gibbes, M. D., Columbia,
S. C.

THE general circumstances sur-
rounding the recent epidemic of
influenza bear a striking parallel
to all of the pandemics of this disease
which have preceded it. The sudden
appearance, the rapid spread, and the
high morbidity of this plague are al-
ways of sufficient moment to create
panic in the public mind and to decid-
edly disturb the even keel of profes-
sional opinion. As pointed out by Dr.
Goodhardt in Albutt's System of Med-
icine, it is probable that this disease
has recurred in periodic outbreaks in
England since the latter part of the

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1919.

16th century, though such appellations as the "gentle correction" and "the new delight" must seem peculiarly inapt to those of us who have witnessed the truly harrowing features of the "Spanish Flu." One would think that in approximately 400 years the lay mind would have been robbed of some of its mystification and superstition associated with the outbreaks of influenza, and that the medical profession would be unfailing in its recognition and somewhat proficient in its control. But such distinction cannot be justly claimed. The very term "influenza" implies ignorance and fear, being simply the Italian equivalent for influence, and the same may be said of the French designation of the disease, *la Grippe*. Peculiar atmospheric conditions, meteorologic and telluric influences, and the idea of a Providential affliction upon a wicked world, which represent the groping explanatory efforts of previous centuries have given place to thoughts of a poison disseminated by German activities, and fears of a world-wide epidemic of the bubonic plague in our 20th century. The records of our army camps and our bureaus of vital statistics too plainly establish the futility of our efforts at control.

Rapidity of Spread of the Disease.—In December, 1889, influenza, traveling westward, had established itself in several German cities, and in the latter part of this same month it had appeared in the United States. In 1918 the progress of the epidemic from Europe to America was very much slower, the disease apparently having been in full bloom in Spain in July and showing itself for the first time in Boston in the middle of September. The explanation of the discrepancy is clear. In the latter part of the 19th century the preponderance of travel was from Europe to America. During the sum-

mer of 1918 there was a vast flow of humanity from this country to Europe, and relatively little travel in this direction. But in striking contrast to this is the extreme rapidity with which the disease spread within the states. In approximately two weeks after its appearance at Chelsea, Massachusetts, there was a raging epidemic at Newberry, S. C., and in an incredibly short time the entire country was suffering from its ravages. Increased facility for travel and the unprecedented volume of travel within this country because of military activities furnish the explanation.

Identity of the Disease with that of 1889.—It is not necessary for me to dwell upon this phase of the subject. In my personal experience, I have found no clinical manifestation of influenza that has not been clearly described by observers of the epidemic of 1889. The relatively long period which usually elapses between pandemics of influenza is responsible for the fact that few keen clinical observers live through two of these world attacks. However, we are fortunate in having had such a competent clinician as Dr. Alfred Stengel, of Philadelphia, describe his experiences in the two most recent pandemics.

Striking Clinical Features of Influenza:

1. Prostration out of proportion to the objective findings is a classical feature of this disease. In some cases the fever is very low and the examination of the patient gives very inadequate explanation of the degree of his malaise. But in the majority of the cases that I saw last fall the fever was sufficiently high and objective findings in the paranasal sinuses, throat, or chest sufficiently definite to amply account for the subjective complaints.

2. The slow pulse was an extremely striking feature of the disease. In

the epidemic of 1889 the British and German clinicians found a pronounced bradycardia to be the rule, while the French observers seem to have been struck with the tendency of the pulse rate to increase in proportion to the temperature. I have frequently noted a pulse rate of 60 to 70 with a fever of 102 or 103, and have been greatly surprised to find that the actual bradycardia persists in spite of the onset of pulmonary complications. I believe that the pulse temperature disproportion in influenza is even more marked than that seen in typhoid fever.

3. Cyanosis or suffusion of the skin was remarkably constant, being a pathognomonic sign in the recent epidemic. From a dusky suffusion, readily fading on pressure, in the uncomplicated, acute cases, one passed gradually into the most extreme grades of cyanosis, some of the pneumonia patients turning almost black before demise. In the early stages, one would naturally explain the condition on the basis of a vaso-motor paresis resulting from the toxæmia, possibly a specific effect upon the vaso-constrictor nervous mechanism. In the extreme cyanosis of the complicating pneumonias, I have had the impression that the condition was essentially one of carbon dioxide intoxication resulting from faulty oxygenation of the blood consequent upon the massive pulmonary involvement. However, the work of Harrop³ would tend to contradict this idea. He has found that the oxygen combining capacity and the oxygen content of the venous blood in these patients deviated from the normal only in the very last stages and practically with the onset of collapse. An adequate explanation is yet to be received.

4. In a very high percentage of acute influenza cases a peculiar "sticky rale" was to be heard over some portion of the lung area. This finding is

discussed by Goodhardt. The rale is such as one hears in the earliest stages of a lobar pneumonia, and which one might readily imagine to result from the condition of engorgement of the lung. I have usually found the rale over a very small area, not much larger than the bell of a stethoscope, and entirely unassociated with percussory or auscultatory signs of pulmonary consolidation. In uncomplicated cases the rales usually persist for several days after the fever has disappeared, and I believe this to be a very important criterion for deciding upon letting the patient resume some of his physical activities. In other cases I have detected, at the end of two or three days, signs of pulmonary consolidation beginning over the area that the rales were first heard. It seems to me important to realize that this rale does not mean pneumonia, but that its presence represents grave potential trouble.

5. Haemoptysis is frequent in simple influenza. In the absence of post mortem studies on uncomplicated cases, one would feel an hesitancy in making this statement. But we have frequently seen patients in whom we could detect no signs of pneumonia who were expectorating a bright red frothy sputum. The findings of Lyon⁴ would seem to indicate that the primary pathology of the disease is frequently an hemorrhagic condition of the respiratory mucous membranes and pleurae.

6. The polypnoea associated with the pneumonias following influenza is frequently of the most extreme grade. This is usually associated with the profound cyanosis mentioned above. I have seen several patients breathe at the rate of 55 to 60 times per minute for two or three days preceding death. This type of polypnoea was entirely

unknown to me prior to the influenza epidemic.

7. The actual leucopaenia⁵ that occurs in influenza is worthy of comment. A count below 8,000 is almost universal in uncomplicated cases. With the onset of pneumonia the leucocyte count may remain low or tend to increase, presumably depending upon the microorganism responsible for the pneumonia. This one phase of the disease leads me to look with great doubt upon the suggestion that various types of streptococci or pneumococci may be regarded as etiologic agents in influenza.

8. Finally, the very pronounced tendency to recrudescence or relapse in this disease is of great importance. It is appalling to think of the number of people who had apparently recovered from a mild attack of influenza only to be taken again with a more severe seizure and to die. In typhoid fever a persistently palpable spleen after the subsidence of the fever is looked upon as an omen of impending relapse, and the patient is governed accordingly. I believe that the "sticky rale" in the chest may have much the same significance in influenza, and certainly no influenza patient should be allowed to get out of bed until a most careful physical examination of the chest has been made.

The complications of influenza are without limit. I wish to mention briefly the most common ones observed by me.

1. Pneumonia. This, of course, was by far the most frequent complication. The most striking phase of this condition was the extent of lung tissue involved⁶ in many cases. I have frequently noted the appearance of a small patch of pneumonia at the angle of a scapula, and have observed the gradual spread of the consolidation until there remained not a spot over

the entire lung area that was free of auscultatory signs of pneumonia. At times one gained the impression that the pneumonia was of a confluent type, small discrete patches appearing in the different lobes and gradually merging into each other until there was in effect a lobar pneumonia of all of the lobes. These relatively long drawn out, extensive pneumonias were usually associated with urgent air-hunger, intense cyanosis, an harrassing unproductive cough, and a peculiar clearness of mentality in many instances persisting up to the last few moments preceding death. In contrast with this picture was the fulminating, wet type of pulmonary complication, presenting a picture of acute pulmonary oedema, and giving one the impression of the patient drowning in his own secretions. This latter condition has been described as an acute inflammatory pulmonary oedema by Friedlander⁷ and his associates.

2. Empyema.—This complication became increasingly frequent as the epidemic progressed. Two phases were of particular interest. In the first place the collections were often very small and difficult to locate. In the presence of definite physical signs of fluid, repeated needlings gave negative results, and great persistence in searching for the fluid was necessary. When careful watch was kept for this complication, the fluid detected was often of a serious character, but unlike the fluid of a simple pleural effusion in gross appearance, but with a much higher albumin and cell content. Aspirations of this type of fluid often served to relieve the condition. In many instances it was found possible to avoid operation by means of a continuous suction apparatus attached to a needle.

3. Sinusitis.—This was one of the most painful complications of the dis-

case. In the majority of instances conservative measures sufficed for relief, but frontal sinus drainage was at times necessary.

4. Laryngitis.—A simple laryngitis was frequently noted. This was most often a simple catarrhal inflammation and cleared up in a few days with no further inconvenience than temporary loss of voice.

5. Psychoses.—Aside from the delirium associated with the febrile state and one case of dementia praecox, our experience has been free of these complications. Menninger⁸ gives an excellent consideration of the subject, and shows that in a series of 100 cases of mental disease associated with influenza practically every known type of mental trouble was found.

6. Pregnancy.—It seems to me proper to consider this condition as a complication of influenza because of the very high mortality among pregnant women who contract the disease. I shall never forget the mixed feeling of scepticism and horror that I experienced upon my visits to Newberry when the disease was at its height in that city when the physicians there told me that every pregnant woman who had had the disease had aborted and died. A small experience in this connection is of little significance. Suffice it to say that I noted the increased mortality rate that occurred among pregnant women. A very careful presentation of this phase of the subject is by Harris⁹ in which he notes a gross mortality of 27% in 1350 cases of influenza complicated by pregnancy. Pneumonia occurred in about 50% of these patients, and 50% of the pneumonia cases died.

7. Peritonitis.—I failed to observe a single instance of peritonitis complicating influenza. Beals¹⁰ and his associates state that they found it in

4.27% of 140 cases of broncho-pneumonia coming to autopsy.

8. Subcutaneous Emphysema.—This is a relatively unique complication of pneumonia. Dr. Williams has reported such a case from the State Hospital for the Insane, and articles by Clark & Symmott¹¹ and Torrey & Grosh¹² describe the condition. The mechanism of this complication must be represented by the adhesion of the parietal to the visceral pleura and the subsequent rupture of an emphysematous bleb through this point. A pulmonary emphysema of the grade necessary to produce this result must be associated with a massive consolidation of the lungs.

Surgical Considerations.—These may be considered briefly under three heads.

1. Surgical operations for recognized complications. The only point of importance in this connection is for the surgeon to bear in mind that a considerable number of the empyemas following influenza can be cured by aspiration, and this is deserving of trial before theacostomy is done.

2. It is of the utmost importance that we keep ever before us the fact that people who have taken ether and have been submitted to operative procedures have a distinctly lowered resistance to influenza and the secondary pneumonias. In the beginning of the epidemic in Columbia we had this fact forcefully brought home to us. It seems safe to advise that only absolutely unavoidable surgery be undertaken during an epidemic of influenza.

3. The surgeon must be impressed with the fact that abdominal manifestations of influenza, or its complicating intrathoracic conditions may closely simulate inflammatory conditions inside of the abdomen. I have seen several cases in which it was quite difficult to decide as to the true condition.

but a careful physical examination and leucocyte count will most often give the necessary information. I have known two cases of simple influenza to be operated upon for supposed inflammatory disease of the appendix. Again, I have seen an intestinal paresis from the toxæmia of such pronounced degree as to lead to serious thoughts of operation for intestinal obstruction.

Efforts at the Control of the Disease.—It is, of course, unwise to say that general prophylactic measures directed at the control of any epidemic disease are unavailing, for, despite a high morbidity, it is impossible to know whether the incidence of the disease would not have been higher had not the preventive measures been instituted. However, in comparing the percentages of population affected in the recent pandemic with those of previous outbreaks, one cannot escape the impression that our efforts in this direction have proved largely futile. A typical illustration of this is furnished by the experience at Camp Sherman.⁷ Here prophylactic measure were synonymous with military orders, and consequently possessed of much greater authority than is possible in civil communities. In spite of this favorable situation 33.22% of the camp population contracted the disease. It is impossible to know what the incidence of the disease in the country as a whole really was, but one certainly gains the impression that the scourge was fully as widespread as that described in 1889. It is estimated that there were over 400,000 deaths in the United States attributed to influenza, and, on an average mortality basis of 5%, this would represent eight million cases of the disease. Such figures cannot flatter us as to the efficacy of our public health measures in the control of influenza. A point in this connection which we should not

pass without mention is the question of prophylactic vaccination against influenza. The whole subject is on an unscientific foundation, for as yet we have failed to fix an etiologic responsibility for the disease. On general principles one must condemn "shot-gun" vaccines containing as many as seven different micro-organisms, and it seems to me decidedly unfortunate that some of these preparations have been presented to the profession and the public with the stamp of approval from some of our largest clinics and by a few of our best known workers in bacteriology. I feel safe in saying that this type of vaccination has accomplished little or nothing in the prevention of the disease.

To my mind the treatment of influenza is expressed in the one word **rest**. Complete physical rest in bed from the time of the first manifestation of the disease until the patient has been free of fever and all physical signs of the malady for at least three days in a mild case. The convalescence in bed should be prolonged in proportion to the severity of the attack and the debility of the patient. The patient should be required to use a bed-pan throughout the disease, and should not be allowed to sit upright in bed for meals. Mental and nervous rest should be insured by proper surroundings, necessary sedatives, and mild hydrotherapy. A nutritious, soft diet, and an abundance of water completes the management of the average case. The intravenous injection of serum taken from patients who have recovered from the complicating pneumonias¹³ would seem to rest on a rational basis. The reports from the literature are encouraging, but such measures are not susceptible to general adoption because of the technical difficulties which surround them.

Dr. Stengel² recalls that in one of

the last lectures which he attended as a medical student the lecturer jekingly wished for the class the good fortune of an epidemic of influenza shortly following their graduation. Experience has surely taught every man of us the unwisdom of such a wish. But I doubt if any of us would lightly part with the clinical experiences which we have gained through the activities of this disease.

Bibliography.

1. Goodhardt (J. F.) System of Medicine (Allbutt & Rolleston) New York & London, 2nd ed., 1905, I, 942-967.
2. Stengel (Alfred). Med. Clin. of North Am. Philadelphia & London, 1918, II, 645-669.
3. Harrop. Johns Hopkins Hosp. Bull. 1919, XXX, 10.
4. Lyon. J. Am. M. Ass. 1919, 72, 924.
5. Keegan. J. Am. M. Ass. 1918, 71, 1051.
6. Chickering & Park. J. Am. M. Ass. 1919, 72, 617.
7. Friedlander, et al. J. Am. M. Ass. 1918, 71, 1652.
8. Menninger. J. Am. M. Ass. 1919, 72, 235.
9. Harris. J. Am. M. Ass. 1919, 72, 978.
10. Beals, et al. J. Am. M. Ass. 1919, 72, 850.
11. Clark & Synnott. Am. J. M. Sc. 1919, CLVII, 219.
12. Torrey & Gosh. Am. J. M. Sc. 1919, CLVII, 170.
13. McGuire & Redden. J. Am. M. Ass. 1919, 72, 709.

NOTES ON THE TREATMENT OF MORPHINISM.

By Hansell Crenshaw, M.D., Atlanta, Ga.

THE following observations are based on the treatment of approximately one hundred patients addicted to morphine. After discarding the gradual reduction method as futile, and experimenting with several plans of treatment, I have adopted the following modification of the Townes-Lambert treatment as the safest and best.

First the patient is given a physical

and neurological examination to enable me to decide whether he is physically able to stand withdrawal of the drug and whether he has any condition, such as malignant disease, which demands continuance of the narcotic. Occasionally a patient needs radical treatment, surgical or intravenous, for example, before he is sufficiently relieved of some painful affection to prepare him for withdrawal of the drug.

If the examination reveals nothing to hinder beginning the anti-morphine treatment, the next step then is to put the patient in a suitable sanitarium, and find out how much morphine he or she takes in twenty-four hours; and how and when it is taken. The patient is then given a bath and his clothes and effects searched for any hidden stock of morphine he may be holding in reserve. During the first day he is given his full customary supply of the narcotic. Also he is allowed general diet, except that supper is left off. At bed-time three c.c. pills and six grains of calomel are administered. Next morning a full dose of Epsom salts is ordered before breakfast; and the doses of morphine for the day are cut in half. If the patient has been taking ten grains a day, I reduce him after the free purgation, on the second day, to five grains. An interesting observation is that he gets along just as comfortably on five grains as he did on ten.

No further change is made in the treatment during the second and third days till supper-time of the third night. Then supper is again left off and the same purgation, or a somewhat stronger one than was given on the first night, is administered. Next day I reduce the dose of morphine by half again, that is, to two and a half grains, if five grains had been given the day before.

For two days now the patient is allowed to have his two and a half grains, but on the night of the sixth day the third purging is ordered; and on the following day the dose of morphine is cut, as before, in half. Thus we are down, say to one and a fourth grains in twenty-four hours. The patient is held at this two days, then denied his supper and purged for the last time.

Next morning begins a forty-eight hour fast; and the patient is put in a state of so-called twilight sleep by the administration of a hundredth of scopolamine and a sixteenth of morphia. A two hundredth of scopolamine is repeated about q. 4 h. to keep the patient barely under the effect of the drug for forty-eight hours. No food except water is allowed during this time, because the patient cannot digest it well.

At the end of the forty-eight hours the patient is allowed to wake up and begin light diet. Next day general diet is in order. During this first period after the complete withdrawal of the drug, aspirin is used for aches and pains; spartine is one-grain doses and tincture of belladonna (ten drops) as stimulants, p. r. n.; gelsemium three times a day may be used as a motor sedative.

The patient is kept in the sanitar-

ium for at least two weeks after the final withdrawal of the morphine. During this time he is built up as much as possible by baths, exercise and liberal feeding. He leaves the place a free man.

Since adopting this method of treatment, I have had not above ten per cent. of failures. A few patients are constitutionally neurotic and do not really want to quit; a few others have organic diseases which demand the drug.

Perhaps my best case was that of a delicate old lady, 64 years old, who had been addicted to opium thirty-five years. She had taken it in all its forms, powdered opium, laudanum, and morphine. She was in the sanitarium six weeks. I have had her under close observation since the treatment. It is now three years and she has not had an atom of any sort of narcotic. She is in good health.

I treated one case from New York who "hit the pipe." I transferred him to morphine hypodermically, then treated him for the morphine successfully.

The four essentials in the successful treatment of morphinism are: Sanitarium handling of the case; extreme purgation; some antidote of the belladonna group; and forty-eight hours of fasting after the withdrawal.

SOCIETY REPORTS

LAURENS.

Clinton, March 24.—The Laurens County Medical Association held its regular monthly meeting here today at the Clinton Hospital from 4 to 7 p. m. The Association came on the invitation of Dr. S. C. Hays, the new president, and the occasion was a very delightful one in every detail. Dr. Hays did not deliver an address as is customary when the new president takes the chair, but departed from the old custom a little and read an excellent paper on "Antiseptics in War Surgery." The paper was very much enjoyed and listened to with much in-

terest and pleasure. Dr. R. R. Walker, of Laurens, read a very instructive paper on "Influenza," which was discussed by all present.

After the papers a sumptuous three-course dinner was served, which sounded all the keys in the gamut of toothsome harmony. While the cigars were on Dr. Hughes, in a very witty and appropriate little speech, thanked Dr. Hays for his very delightful hospitality. Those present were: Drs. Pace, Rodgers, and Beason, Gray Court; Femel, Waterloo; Teague, Ferguson, Dial, Walker, Bearden, Chris-Davis, Sheely, Bailey, Young, Sr., Young, Jr., and Austin, Clinton.

BOOK REVIEW

INTERPRETATION OF DENTAL AND MAXILLARY ROENTGENOGRAMS. By Robert H. Ivy, M.D., D.D.S. Major, Medical Reserve Corps, United States Army; Associate Surgeon, Columbia Hospital, Milwaukee; formerly instructor in Oral Surgery, University of Pennsylvania. With 259 illustrations. St. Louis. C. V. Mosby Company, 1918. Dental.

No up-to-date practitioner can keep thoroughly abreast of the times without some knowledge of dental Pathology as interpreted by this author. This little book will serve a most useful purpose along this line.

GENITOURINARY DISEASES AND SYPHILIS. By Henry H. Morton, M.D., F. A. C. S. Clinical Professor of Genitourinary Diseases in the Long Island and Kings County Hospitals and the Polhemus Memorial Clinic; member of committee on Venereal Diseases in the office of surgeon-general; Consulting Genitourinary Surgeon to the Flushing Hospital, to the Sea View Hospital of Department of Health, New York City, to the Bushwick Hospital, and to the Beth Israel Hospital of Newark, N. J.; member of the Ameri-

can Urological Association, Fellow of the American College of Surgeons; Fellow of the New York Academy of Medicine, etc. Fourth Edition, revised and enlarged. With 330 illustrations and 36 Full-Page Colored Plates. St. Louis. C. V. Mosby Company, 1918. Price \$7.00. Morton.

Morton presents the 4th edition revised and enlarged. The subject matter has been carefully brought up to date and this is the 4th edition since 1902. The illustrations are good and the book covers the whole subject thoroughly.

THE OPERATIONS OF OBSTETRICS Embracing the Surgical Procedure and Management of the More Serious Complications. By Frederick Elmer Leavitt, M.D. Formerly Assistant Professor of Obstetrics and Gynecology, University of Minnesota; Obstetrician to the City and County Hospital, the St. Paul Hospital, the Bethesda Hospital, etc., St. Paul, Minnesota. With 248 illustrations. St. Louis. C. V. Mosby Company, 1919. Leavitt.

The operative procedures advised by the author of this book appear to be unusually clear cut and authoritative. The illustrations are far above the average,

the paper print and general make-up of the book satisfactory. We heartily recommend, especially to the general practitioner this volume. The price is \$6.00.

NEW AND NONOFFICIAL REMEDIES, 1919. Containing Descriptions of the Articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1919. Chicago. American Medical Association. Five hundred and thirty-five North Dearborn street, New and Nonofficial Remedies is a book in which are listed and described the articles that stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, of the year of publication. The descriptions of accepted articles are based in part on investigations made by or under the direction of the Council and in part on evidence or information supplied by the manufacturer or his agents. Statements made by those commercially interested are examined critically, and are admitted only when they are supported by other evidence or conform to known facts.

ORAL SEPSIS IN ITS RELATIONSHIP TO SYSTEMATIC DISEASE. By William W. Duke, M.D., P.H. B., Kansas City, Mo. Professor of Experimental Medicine in the University of Kansas School of Medicine; professor in the Department of Medicine in Western Dental College; visiting physician to Christian Church Hospital; consulting physician to Kansas City General Hospital, Kansas City, Mo., and to St. Margaret's Hospital, Kansas City, Kan. With 170 illustrations. St. Louis, C. V. Mosby, Company, 1918.

Much has been written in recent years about Oral Sepsis in its relationship to systematic disease and there probably is room for more books on the subject. The volume under review will meet the approval of the profession and deserves to be widely read.

THE SURGICAL CLINICS OF CHICAGO. Volume III Number I (February 1919). The Surgical Clinics of Chicago, Volume III, Number 1 (February 1919.) Octavo of 236 pages, 75 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Published Bi-Monthly: Price per year: Paper \$10; Cloth \$14.00.

The following are some of the excellent articles in this volume:

Contributions by Major Kellogg Speed, M. C., U. S. A. Surgical cases at an A. E. F. Evacuation Hospital.

Contribution by Lieut. Colonel Frederic A. Beeley, France. Secondary Hemorrhages as observed in war surgery.

Clinic of Dr. Arthur Dean Bevan, Presbyterian Hospital. Obstruction of the Ileum due to tuberculous ulcerations. Injuries of the shoulder joint.

Treatment of intestinal fistula by means

of bismuth paste.

Spina Bifida.

Carinoma of face.

Carinoma in the ailla.

Sarcoma of the labium.

Clinic of Dr. Edward H. Ochsner, Augustana Hospital.

Three cases of sinus disease.

Clinic of Dr. A. J. Ochsner, Augustana Hospital Hyposadis.

Excision of ganglion from hand.

PATHOLOGICAL TECHNIQUE. The new (7) Edition. Pathological Technique. A practical manual for workers in Pathologic Histology & Bacteriology. Including directions for the performance of autopsies and for clinical diagnosis by laboratory methods. By F. B. Mallory, M. D., associate professor of pathology, Harvard Medical School; and J. B. Wright, M.D., pathologist to the Massachusetts General Hospital. Seventh edition, revised and enlarged. Octavo of 555 pages with 181 illustrations. Philadelphia and London: W. B. Saunders Company, 1918. Cloth \$3.75.

Pathology.

Mallory and Wright are authors of unquestioned reputation and here present the 7th edition of their book which is designed especially for practical use in pathological laboratories both as a guide to beginners and as a source of reference for the advanced.

QUARTERLY MEDICAL CLINICS. A Series of Consecutive Clinical Demonstrations and Lectures by Frank Smithies, M.D., at Augustana Hospital, Chicago. Volume 1, Number 1. Published by Medicine and Surgery Publishing Company Inc., Metropolitan Building, St. Louis. Quarterly Clinics. Smithies of the Augustana Hospital, Chicago, presents a new series of clinical demonstrations and lectures published for the first time. For the most part the work is a report of the author's clinics at this well known hospital presented in a most simple manner with every detail given.

THE MEDICAL CLINICS OF NORTH AMERICA. November 1918. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

Among the excellent articles are the following:

Clinic of Dr. Alfred Stengel, University Hospital. The Influenza Epidemics of 1889 and 1918.

Clinic of Dr. H. R. A. Landis, University Hospital. Influenza and some of its Complications.

Contribution by Dr. John B. Deaver. The Surgical Complications and Sequelae of Influenza.

Contribution by Dr. Randle C. Rosenberger. Bacteriologic Study of Sputum in the Recent Epidemic.

Clinic of Dr. Charles W. Burr, Phila-

delphia General Hospital. The Mental Complications and Sequelae of Influenza.

Contribution by Lieut. Eugene A. Case, M. C., U. S. N. R. F. Bacteriology of Influenza.

Contribution by Dr. J. Leslie Davis. Nose, Throat, and Ear Affections Complicating or Following the Recent Epidemic of So-called Influenza, with a Ventured Interpretation of their Significance.

Clinic of Dr. Maurice Ostheimer, University Hospital. Influenza in Children.

CLINICAL MICROSCOPY AND CHEMISTRY. Clinical Microscopy and Chemistry, by F. A. McJunkin, M.D., professor of Pathology in the Marquette University School of Medicine; formerly an Assistant in the Pathological Laboratory of the Boston City Hospital. Octavo volume of 470 pages with 131 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$3.50.

The subject matter of this book has been presented in a clear cut satisfactory manner, the illustrations are good and both the student and practitioner will be able to acquire a considerable working knowledge by careful study of the book.

SURGICAL TREATMENT. Volume III. Surgical Treatment. A Practical Treatise on the Therapy of Surgical Diseases for the use of Practitioners and Students of Surgery. By James Peter Warbasse, M.D., formerly Attending Surgeon to the Methodist Episcopal Hospital, Brooklyn, New York. In three large octavo volumes, and separate desk index volume. Volume III contains 861 pages with 864 illustrations. Philadelphia and London: W. B. Saunders Company. 1919. Per set (three volumes and the Index volume): Cloth \$30.00 per set.

Volume three completes the system of surgery by this author. A monograph such as is here presented will prove of inestimable assistance to the busy surgeon in his daily work. The viewpoint of the master has been set forth and, therefore will have much weight with the reader. The indexed volume for desk

use is also a handy little book for ready reference.

NEW AND NONOFFICIAL REMEDIES. containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Janu. 1, 1919. Cloth. Price, postpaid, \$1. Pp. 388 + XXIX. Chicago: American Medical Association, 1919.

In this book are listed and described those proprietary remedies which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association and which should, therefore, merit consideration by the medical profession. The book also includes the newer nonofficial nonproprietary remedies that seem to the Council to give promise of therapeutic value. New and Nonofficial Remedies makes use of the Federal Trade Commission names for products originally introduced into this country by German manufacturers. These include arsphenamin, barbital and procain preparations replacing salvarsan, veronal and novocain respectively. The Council has omitted from the present edition all articles not now on the market, many of them originating in enemy countries. Among the most valuable features of this book for the physician are the thorough discussions of various therapeutic substances, including composition, dosage, therapeutics, actions and uses, etc. The articles on digestive ferments, serums and vaccines and silver preparations have particularly been thoroughly revised, and it will be to the interest of every physician to acquaint himself with the present status of knowledge regarding the use of these preparations as brought out in this book. In a supplement to the book are given references to the reports of the Council on Pharmacy and Chemistry and the publications of The Journal regarding proprietary articles which have not been accepted. The material available in this book is nowhere else available, and its authoritative character makes it a therapeutic guide which should be in the hands of every practitioner.

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A B S T R A C T S

CONSTITUTIONALITY OF HARRISON NARCOTIC DRUG ACT UPHELD BY SUPREME COURT.

The United States Supreme Court has decided that the Harrison Narcotic Drug Act is constitutional. The exact status of this law has been a matter of discussion since its passage. While it had been variously interpreted by United States district and appellate courts, its constitutionality had never been passed on by the United States Supreme Court. In two decisions, involving practically the same points, the Federal Supreme Court holds the act constitutional and rejects the claim that it is an invasion of the police power reserved to the states. In the first case, *United States vs. Doremus*, the district court of the western district of Texas held the act unconstitutional on the ground that it was not a revenue measure and was an invasion of the police power of the states. The evidence shows that Doremus, a physician who was duly registered and who had paid the tax required by the act, sold to a patient, a morphin habitue, 500 one-sixth grain tablets of heroin, the sale not being in pursuance of a written order on one of the forms furnished by the Internal Revenue Department. The court says that the Harrison law was passed under article 1, section 8, of the constitution, which gives congress the power to lay and collect taxes for the general welfare, and that the only limitation placed on the power of congress is that such taxes must be uniform. To this limitation the Supreme Court declares that it cannot add others. Subject to such limita-

tion, congress may select the subjects of taxation and may exercise the power conferred at its discretion. The fact that other motives may impel the exercise of federal taxing power does not authorize the courts to inquire into that subject. If the legislation enacted has some reasonable relation to the exercise of the taxing authority conferred by the constitution, it cannot be invalidated because of the supposed motives which induced it. Nor is it sufficient to invalidate the taxing authority given to congress by the constitution that the same business may be regulated by the police power of the state. An act may not be declared unconstitutional because its effect may be to accomplish another purpose as well as the raising of revenue. If the legislation is within the taxing authority of congress, that is sufficient to sustain it. This means that so long as an act is in proper form as a tax measure, congress may regulate anything that it may desire through its tax-levying power without regard to whether the subject is one that may be regulated by the states or whether the real object of the act may be reformatory or restrictive rather than revenue producing. So long as the law is a tax-levying law in proper form, the courts will not go into the motive for which the act was passed. Evidently this decision represents the opinion of a bare majority of the court, since it is signed by only five justices: the chief justice and three other members of the court dissenting and holding that the district court correctly held the act to be beyond the constitutional power of congress in that it was an attempt by congress to assert a

power not delegated, that is, the reserved police power of the states. Chief Justice White and Justices McKenna, Van Devanter and McReynolds, the dissenting justices, evidently regard the Harrison act as an invasion of the police power of the states and not a proper subject for federal legislation. The decision was written by Mr. Justice Holmes, and the justices concurring are Day, Pitney, Brandeis and Clarke. The second case, Webb and Goldbaum versus the United States, involves the same issue. On this, as on the previous decision, the court was divided five to four.—Journal A. M. A., May 10, 1919.

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Dr. H. A. DUEMLING, Fort Wayne, Indiana, says: "I unhesitatingly recommend your Collection Service to my co-workers in the Medical Fraternity." (Grand total collections made for Dr. Duemling to February 20, 1919, amounts to \$4,759.50.)

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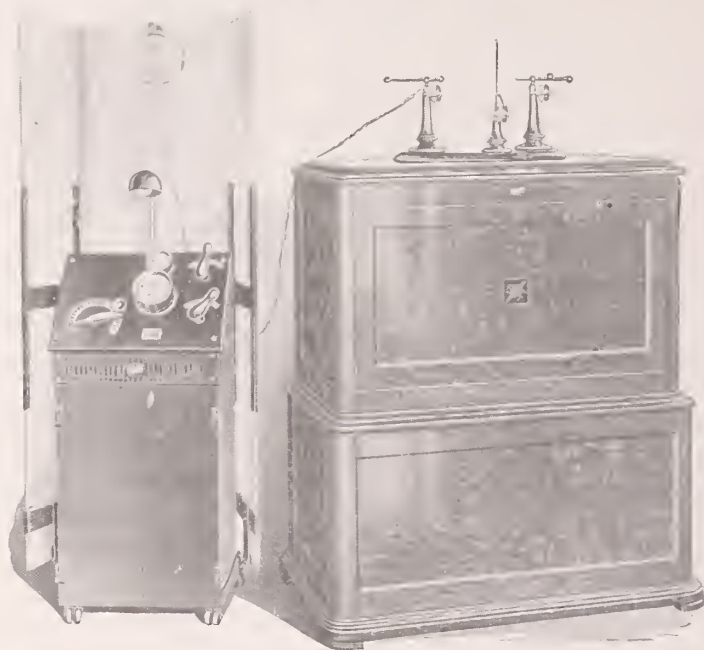
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The Journal OF THE South Carolina Medical Association

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EYE, EAR, NOSE, AND THROAT.

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EDITORIAL

PRESIDENT E. W. PRESSLY.

The election of Dr. E. W. Pressly of Clover, S. C., to the Presidency of the South Carolina Medical Association was highly gratifying to the entire membership. Dr. Pressly has been one of the most active members of the organization, filling a number of positions of honor. He is especially well known as a brilliant speaker and has charmed the State Association frequently by his eloquence.

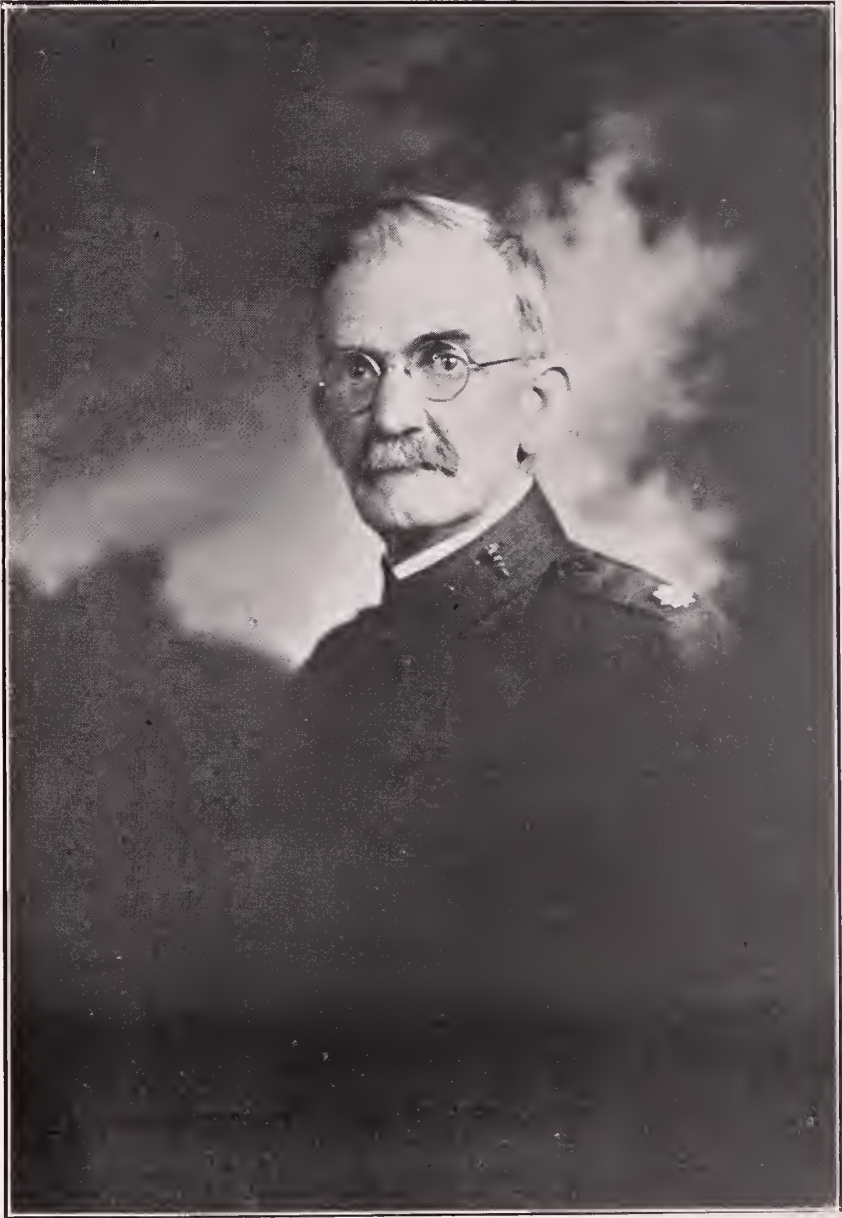
He was born in Anderson County, S. C., November 20, 1863; lived at Due West, S. C., from December 1871 to April 1887. Graduated from Erskine College June, 1883—graduated in medicine from the University of Maryland, 1887. He practiced his profession at Clover, S. C., from 1887 to August, 1917, when he entered the

army at Camp Sevier, S. C., as first lieutenant August 16, 1917. He was promoted to a Captaincy November 25, 1917; promoted to a Majority June, 1918, made commanding officer Base Hospital, Camp Sevier, August 16, 1918; promoted to lieutenant colonel September 11, 1918.

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ORIGINAL ARTICLES

INFUENZA PNEUMONIA.

By T. L. W. Bailey, M.D., Clinton, S. C.

IN asking your attention to the discussion of this subject I am in great hope that you will develop the question so much that I will feel amply paid for precipitating the subject. More universal thought, investigation and study has been given this subject in a short time than any other subject that has been studied in the medical world. It has been a stupendous question involving not only every nook and corner of America, but all the nations of the world, carrying with it an enormous death rate.

Therefore, I say where the dread disease has been so high in mortality and involving universal citizenship, it is time for us to give to it something more than passing notice. It has also been thrust at us. "Do we know any thing about the disease?" Why yes of course and learning more every day. But a question like this may put the profession on notice, to be thorough in the investigation of symptoms and the study of treatment.

The frequent complication of pneumonia with this disease is what I mainly wish to discuss. The vital statistics of South Carolina for the month

of October, 1918, shows a record of 4,000 deaths from influenza all being complicated with pneumonia. This table showing no other complication that caused death. This complication proved the vulnerable point of mortality. This result then would necessarily and naturally lead us up to the point, to watch for this lesion and be on the alert to prevent it in all cases that we have of influenza.

Symptoms of Pneumonia.—Now this leads me up to discussing the symptoms. In the greatest number of cases I have had I have found the symptoms rather insidious, it does not come out in a bold way as the regular lobar pneumonia does, that is due to the pneumococci. We find a lobular spot of inflammation here and there, the pain not so distressing, the fever pulse and resp. not greatly aggravated, and on auscultation you find it very difficult to detect the crepitant rale. But on careful and persistent search you will find it. For the auscultatory method, you should have the patient bared to the skin and examine carefully every area of surface both back and front. It is not necessary to do this daily unless you find symptoms that indicate a complication of the heart or spread of the pneumonia. I must advise you too that nature has walled off a limited zone in the respiration, due to pain that comes on with a deep inspiration or cough

and you will not find the pathognomic rale (crepitus rale) without having the patient to either take a deep inspiration or cough. After a case of influenza has had a fever for four days you may well look out carefully for a complication. The greater number of my patients had their pneumonias in the lower lobes of each lung, all the cases I observed were double.

I will not go into the treatment of pneumonia except to say that prevention of the complication, by proper handling of the case in its beginning is the best way to keep the mortality percentage low.

Now while we feel sure the present epidemic is over and we trust that such a scourge will not pass over us again, I believe that a free discussion on the subject will not be amiss, because a sporadic case here and there will deserve the very best treatment that we can give.

ANTITYPHOID VACCINE — PRECAUTIONS TO BE OBSERVED IN ITS ADMINISTRATION.

Charles V. Akin, P. A. Surgeon, U. S. Public Health Service.

IN 1896 the English scientist, A. E. Wright, initiated the method of prophylaxis of typhoid fever by the injection of 12 day broth cultures of *B. typhosus* sterilized at 60 deg. C, and with the addition of 0.5% lysol. Wright's original technique has since been greatly modified, but it has formed the basis of all subsequent typhoid immunization.

Since 1909 the antityphoid vaccine used in the United States Army is that of Russell, prepared in the Laboratory of the Army Medical School. The manufacture and sale of vaccine by commercial laboratories is under the

supervision of the Hygienic Laboratory of the U. S. Public Health Service. All such products must meet with the requirements of the Treasury Department standards for sterility and potency before being placed on the market. In this way the public is positively protected against inferior biologic preparations.

During the period before the general acceptance of a standard type of antityphoid vaccine, the superiority of the living over the dead bacillary suspension, or vice versa, was a moot question. Besredka was the chief exponent of the living sensitized vaccine, and had it not been for two very pronounced objections, his choice might even now be used. The use of a live vaccine has never become general, first — because the recipient is more than likely to contract the disease as a result of the injection, and second — overworked or enfeebled subjects may readily become carriers of the disease owing to the immediate or delayed growth of the bacilli in their biliary passages.

No other form of specific prophylactic medication has ever been accorded such widespread and enthusiastic acceptance. Few laboratory preparations have attracted so renowned a collection of exact scientific workers. These have labored indefatigably to make the manufacture and distribution of the vaccine "fool-proof." They have succeeded to such an extent that the very impunity conferred by the excellence of the technique they have developed now reacts to make the indiscriminate administration of the vaccine a source of danger.

The simplicity of the technique of vaccination and the high degree of protection conferred have served to popularize the procedure, but because of the commonness of the operation

most of us have lost sight of the body reactions which naturally follow the introduction of this powerful stimulant to the biologic processes. So many thousands of persons have received the prophylactic without apparent ill-effect that one may appear unnecessarily apprehensive in asking recognition for potential dangers which are so seldom manifested as to be unfamiliar to all except a few unfortunate observers.

In antityphoid vaccine the public health worker has one of the most consistently efficient weapons ever devised for the control of a communicable disease. Antityphoid vaccine, like any other medical preparation, be it a specific or a patented nostrum, depends for its general acceptance upon popular fancy. The fickleness of this fancy is too well known to require elaboration. That the public should have a high regard for this specific protective agent is quite proper and indicative of its excellence, but its continued widespread use is of such vast importance that the profession must strive constantly to keep its record unblemished.

As regards the precautions to be observed in typhoid prophylaxis three factors are to be considered:

1. The product to be injected.
2. The handling of the vaccine from the manufacture to administration.
3. The physical status of the individual receiving the prophylactic.

Now that an approved standard has been accepted which regulates the manufacture of biologics, and careful sterility and potency tests definitely identify each lot of vaccine placed on the market, the practitioner is chiefly concerned with the third clause.

A number of commercial laboratories produce and distribute antityphoid vaccine under the supervision of the

Treasury Department. A dependable product may now be procured as easily and readily as one may purchase parts of a Ford car. Unless the product is grossly mishandled after manufacture, the physician may safely assume that the vaccine he uses has retained its sterility and its power to induce the production of specific antibodies. Up to this point assumption of safety may be taken as fact for the procedure so far is "fool-proof."

It is the purpose of this paper to point out the reasonable and necessary precautions which should be exercised (1) to secure the administration of the proper dosage (2) of uncontaminated vaccine (3) to individuals whose physical condition is such as to preclude the probability of unfavorable after-effects (4) which may be directly attributable to the poor condition of the recipient.

The technique for vaccination is the same for all vaccines except as regards the choice of the site of inoculation. In the instance of antityphoid prophylactic the injection is given subcutaneously and never intra-muscularly or into the skin. The site of election is either the sub-clavicular region, the outer aspect of the deltoid area, or below the spine of the scapula. These locations have been chosen because they are relatively poor in nerves and blood vessels. It is essential that none of the injection enter a blood vessel as otherwise an immediate febrile reaction results.

It is, of course, important that the injections be carried out aseptically. This precaution is so obvious as to seem positively elementary, but there seems to be such a wide variation of opinion as to what constitutes necessary surgical cleanliness for hypodermic injections that a reference to an approved technique may not be amiss.

The procedure literally outlined consists of the transfer of a sterile bacillary suspension from a sealed container into the subcutaneous tissue of a human subject without contaminating or otherwise modifying the vaccine. The container, the operator, the hypodermic apparatus, and the site of inoculation should be accorded separate and careful consideration:

A. The Container:

Personal preference has lead one observer to insist on the tubing of vaccine in a hermetically sealed all glass ampoule, while another is content with the protection afforded by rubber-stoppered glass vials with a protective coating of paraffin. Of these two types the all glass ampoule containing one dose of vaccine closed with a flame-seal seems to be the most desirable. Provided the vaccine be sterile when so tubed, we may reasonably conclude that sterility will be maintained so long as the glass remains unbroken. In addition to this the operator is less apt to "save" the unused portion of vaccine when there is no convenient rubber stopper with which to close the container.

Whichever container is selected, one should make certain that the ampoule has not been cracked in handling before the time of administration of the contents.

The ampoules should be sterilized by washing in an antiseptic solution or carefully wiping off with gauze or cotton wet with alcohol. In the instance of flame-sealed ampoules the neck may be lightly flamed and opened after making one or two cuts near the top with a file.

The vaccine can be drawn from the container with a sterile syringe, or it may be emptied into a shallow glass dish which has been sterilized by boiling. Needless to say the handling of

the product to be injected should be minimized.

B. The Hypodermic Syringe and the Operator:

The syringe and the needle should be sterilized by boiling in a 2% soda solution. To insure perfect sterilization of all parts, the piston should be removed from the barrel, or drawn out to such an extent that the barrel will be full of water during the boiling. When giving a number of doses a freshly sterilized needle should be used for each injection.

The operator should give the same careful attention to the sterilization of his hands as is customary in routine surgical procedure. This point is especially worth remembering when it is understood that the occurrence of local abscesses and other unfavorable sequelae cannot be readily assigned to a contaminated vaccine. Irrespective of the constancy of other virtues the products marketed by commercial laboratories are generally sterile.

C. The Subject to be Vaccinated:

Locally the site of inoculation should be cleansed as for other operations. Preliminary mechanical cleansing with soap and water followed by sponging with alcohol or 1 to 1000 bichloride solution is recommended. The immediate site of injection should be painted with tincture of iodine before and after the injection.

Under ordinary circumstances the physician administering the vaccine exercises sufficient care to prevent any of the local ill-effects which might be considered as manifestations of a contaminated vaccine or an infected syringe and needle. Even with careless technique, nothing more serious than local abscesses with consequent loss of the benefit of the vaccine injected would follow ordinary contamination, but sore arms are not consid-

ered lightly by the general public.

The question arises, "to what further extent does the physician customarily safeguard the patients to whom he administers the typhoid prophylactic vaccine?" One is convinced that no special effort is made to ascertain the fitness of the individual for the reception of a large dose of foreign bacterial proteid, nor are the human subjects ever really prepared before the administration of the vaccine.

A counter question may arise as to the necessity for such elaborate consideration for a simple procedure when so many people have been vaccinated and so few complications develop. In defense of this plea for preparedness, I might cite the argument of the Insurance Agent, who said it was better to have one of his policies and not need it, than to need it and not have it.

The State of South Carolina has just been compelled to defend itself in a suit in which the plaintiffs alleged the death of two children as the direct result of the administration of "impure" antityphoid vaccine. These deaths occurred four years ago and a jury has absolved the State from responsibility, but the State of South Carolina was called to trial and the safety of the use of antityphoid vaccine subjected to critical questioning because death followed its administration even though the connection was not established. I hope that some of you in discussing the facts related in connection with these cases may throw some light on the cause of death.

The actual number of definite physical contraindications to the vaccination is limited. Two types or degrees of unfitness are recognized, viz: Temporary, Permanent.

1. The Temporary contraindications are of secondary importance, they mean merely a postponement of the in-

jection. It is best therefore to make a summary medical examination of subjects to be vaccinated, and all who are ill or unduly fatigued should be put off for one week. Any elevation of temperature above normal should be considered as sufficient evidence of abnormality to warrant postponement: This enables the indisposition or acute disease either to disappear or to frankly manifest itself. This simple precaution may often relieve the physician of the embarrassment of explaining severe reactions which result from injecting patients who may be in the incipient stage of some acute infection, such as pneumonia, meningitis, or an eruptive fever. Postponement will also reduce the frequency of cases of vaccinal fever or the so-called severe reactions by exclusion from vaccination persons with slight affections, bronchitis, sore throat, etc.

The permanent contraindications according to Wright are the same in all countries, and in all armies. Severe organic disease, tuberculosis, chronic pleurisy, with or without thoracic deformity, arterio-sclerosis, myocarditis, non-compensating endocarditis, diabetes, chronic nephritis with signs of renal insufficiency, etc.

Malaria per se is not a definite contraindication with the exception of acute cases of malaria, or malarial anemia or cachexia. The only necessary precaution consists in subjecting cases of chronic malaria to moderate saturation with quinine on the day preceding, and on the actual day of the vaccination.

Experience has shown the possibility of a return of a malarial attack if this precaution be neglected.

Syphilis, unless active lesions be present, does not contraindicate vaccination. In syphilitic subjects it may be well to perform a trial injection giving

half the usual dose, then carefully observing the temperature curve. A sharp febrile reaction is not uncommon and when it occurs the vaccination should be postponed pending treatment for syphilis, or else vaccination with fractional doses must be resorted to.

The vaccination of subjects who are delicate but without visceral lesions is thoroughly feasible, it being necessary only to adjust the dose in proportion to the average adult body weight of 150 pounds.

Persons who have been vaccinated should be in a state of repose. Fatigue preceding or immediately following the injection of vaccine is an important cause of post-vaccinal fever. It is well to recommend complete rest during the day on which the vaccine is administered, and the vaccination should be performed whenever practicable between 4 and 6 p. m., so that the subject may be completely relaxed when the reaction time comes on.

The diet of persons receiving antityphoid vaccine is an important consideration. Light meals, preferably of liquid or "soft" character only should be indulged in on the day of vaccination. Persons who have eaten to excess may suffer from vomiting or diarrhoea, or other symptoms of intestinal upset.

During the cold season precautions should be taken to prevent chilling of the body. The exposure of a large skin surface is usually unnecessary and should be guarded against.

The commonest causes of severe reaction following injection of vaccine are:

- (1) Fatigue or over-heating of the body.
- (2) The use of alcohol.
- (3) Over eating.
- (4) Any acute intercurrent disease.

(5) A recent attack of typhoid fever, or vaccination during the incubation state of the disease.

The reaction occurring in the last instance is analogous to that caused by the injection of tuberculin in the tuberculous or mallein in a subject suffering with glanders. It is an example of the specific biologic phenomenon of sensitization.

Dosage of vaccine is an important consideration, and of special interest in connection with the immunization of delicate children, and adults, who because of disease or other physical unfitness are subnormal. The rules for arriving at a proper dose are more or less arbitrary, and in perfectly healthy young subjects a fairly wide degree of latitude is permissible. It is an undisputed fact that children are proportionately more tolerant to the vaccine than adults.

It is agreed by all who have had experience with antityphoid vaccine that its effects unless aggravated by bodily excess or physical deficiency are ordinarily inoffensive. It is agreed further that its general use is of the utmost importance in the control of typhoid fever. It follows logically that any unfavorable occurrences, which by the lay mind may be attributed to the vaccine are of serious import and every precaution should be observed which will tend to obviate such happenings. Any criticism of the procedure of antityphoid vaccination, no matter how lightly based, is unfortunate and harmful. Physicians who urge the use of the vaccine from a high sense of duty to the public and in their routine practice administer a large number of doses annually must not overlook this one fact—even though antityphoid vaccine may not be considered a lethal agent, inasmuch as numerous deaths are not charged

against it, its popular acceptance must not be jeopardized by an irrational fear of possible ill effects. If we carefully examine all persons to whom we administer the vaccine, and exclude all save the fit, we will not only make friends for the measure, but actually cut the number of febrile reactions to 2% or less.

As examples of the charges which may be brought against antityphoid vaccine two cases are reported in which death followed vaccination, and was alleged to have resulted from contamination admitted during the process of manufacture.

Prior to and during the early part of 1915, the South Carolina State Board of Health Laboratory manufactured antityphoid vaccine which was distributed without cost to physicians practicing in the State.

A certain batch of vaccine known as Lot 67 was prepared and distributed during June, 1915.

At 11 a. m. on June 13, 1915, two children in the same family, aged two and one-half and four one-half years, respectively, were inoculated with vaccine, the young receiving about 2 minims, the elder, 3 minims. At six o'clock p. m., seven hours after the injection, the four and one-half year old child became nauseated, and vomited. According to the statement of the attending physician, the child was "cyanosed." The symptoms became progressively worse, and at 11 o'clock p. m., the child was in a state of coma. Convulsions marked the terminal stage of this condition and death occurred 19 hours after the injection. The younger child remained well throughout the day, but developed fever 12 hours after the injection. At six o'clock the following morning this child became nauseated, vomited, cyanosed, and the abdomen

showed marked distension. Alternating periods of coma and convulsions were marked until death occurred 31 hours after inoculation.

In both instances death occurred so promptly that a proper study of the cases could not be made, and in neither instance could an autopsy be secured.

All available data was collected by the Director of the Laboratory, and this together with such information as he gained from exhaustive bacteriological studies of certain unused portions of the Lot No. 67, was submitted in a report which was later printed and distributed to the physicians of South Carolina.

The complete file of these cases was subsequently submitted to several authorities but none suggested a reasonable scientific explanation of the cause of the death of these two children.

Several attempts were made by the administrator of the estate to bring suit against the State of South Carolina, and the General Assembly of 1918 granted an enabling act authorizing the suit to recover \$50,000 in the instance of each child.

The case came to trial by jury on April 7, 1919, in the Richland County Court of Common Pleas.

Based upon the printed report of the Director of the Laboratory, in which the presence of contamination with certain organisms of the *Staphylococcus pyogenes* group was admitted to have been present in some of the ampoules of Lot No. 67, the attorneys for the plaintiff alleged death to have resulted directly from the administration of vaccine contaminated with staphylococci which entered the vaccine because of neglect or carelessness on the part of the Laboratory forces.

By submission of expert testimony, the Attorney General on behalf of the

State sought to prove that death could not have resulted from this contamination in the manner set forth by the attorneys for the plaintiff, and also endeavored to disprove the charge of negligence on the part of the Laboratory forces.

The mass of evidence produced lead the jury to decide in favor of the State, and on April 9, 1919, a verdict was submitted disallowing the claims of the plaintiff.

In this suit the State was exonerated but the fact remains that two children who received a proper dose of anti-typhoid vaccine died within 31 hours after inoculation, and even the most narrow minded friend of the prophylactic measure must admit the reasonableness of the assumption that these children might not have died had they not been vaccinated at that time.

During the trial certain facts were developed which may have a direct bearing on the cause of death.

According to the official report of the Weather Bureau, the temperature in the vicinity in which the children lived, on the day of vaccination was high, 92 deg. F. The children were vaccinated at 11 o'clock A. M., and subsequently were permitted to amuse themselves out of doors without restraint.

The exact diet indulged in is not known but no special effort was made to limit the amount, or character of food eaten.

The factors conducive to an exaggerated reaction were unquestionably operative. Heat, fatigue and unmodified diet with a prolonged period of activity prior to the time at which the reaction might be expected. One of the children was driven through the country in the middle of the afternoon, and this child was the first to become ill.

The sudden onset with nausea and vomiting followed by abdominal distention, fever, marked prostration, and finally convulsions, was indicative of a serious intestinal upset. It is not possible that any known bacterial contamination reaching the subcutaneous tissues could have caused the symptoms preceeding the death of these two children.

The records of the South Carolina State Board of Health show that typhoid fever was more than ordinarily prevalent at the time in and near the community in which this family resided. The possibility of the children having become infected cannot be gainsaid, and if they were in the incubation period of the disease at the time of vaccination we may have a reasonable promise upon which to base our hypothesis as to the cause of death.

The occasion of the vaccination was a casual visit of the family physician. Being aware of the prevalence of typhoid fever in the neighborhood, he recommended that all members of the family be vaccinated. No special examination was made of either the parents or children, and all four received proportionate amounts from the same lot of vaccine. The father developed a severe reaction, and went to bed during the afternoon. The mother was made quite ill, but not until during the night. Of the two children, the one most exposed to the unfavorable circumstances of heat and fatigue first became ill, and died 11 hours before the younger and more delicate child.

The support of the theory that these children of questionable or unknown physical status died from the effects of an exaggerated reaction is offered the fact that the onset of symp-

toms occurred at the time when a reaction was expected.

The only contaminating organism which could be discovered in any of Lot 67 was the staphylococcus. This organism may be disregarded in a consideration of the cause of death as insufficient time had elapsed since vaccination.

The most irreconcilable sign noted was the cyanotic appearance described by the attending physician. According to Osler cyanosis is significant of grave circulatory disturbance or to change in the hemoglobin content of the blood as a result of the action of some ingested or inhaled poison.

It is quite possible that some intense congestion of the superficial skin was observed and not a true cyanosis.

Had these children received injections of a true serum the death might be explained by the application of the phenomenon or anaphylaxis. It is wholly probable that some obscure bacterial toxin did kill them. That the typhoid bacillus does elaborate toxins has been definitely proven by Pfeiffer, Bergier, Vaughan, et al. These workers agree that the toxin formed within the bodies of the bacilli and released when the organisms are digested by the bacteriolytic substances of the animal or human being into which they gain entry possess a far greater toxicity than the bouillon filtrate in which the organisms are grown. Intravenous inoculations of rabbits with typhoid toxins in sufficient quantity produces usually within a few hours a drop in temperature, diarrhoea, respiratory embarrassment and finally death.

It seems reasonable to assume that if these children had a marked idiosyncrasy for the toxins of the typhoid bacillus, and their normal powers of resistance were lowered by

reasons of overeating, fatigue and other debilitating circumstances, death might have resulted from the introduction into their bodies of full doses of the vaccine.

The consensus of opinion of authorities having access to the records of thousands of accurately reported cases of antityphoid vaccination (the offices of the Surgeon General of the U. S. Army Medical Corps, and the U. S. Public Health Service, the Medical Section of the French Ministry of War, etc.) may be summed up briefly as follows: No person shall receive typhoid prophylactic vaccine who is not perfectly healthy, nor shall any person be vaccinated who by virtue of his environment or occupation is at the time suffering from unusual mental or physical depression.

These deaths, whether a correct cause ever be assigned, must serve as a lesson, for we believe they were positively preventable. We are convinced that had these children been normally healthy and free from any acute infectious process; that had the vaccination been performed late in the afternoon, and the subject put immediately to bed, with stomachs at rest, no ill effects would have followed.

Read before the South Eastern Sanitary Association, Rome, Ga., May 12-13, 1919.

BIBLIOGRAPHY

- (1) Med. & Sur. Therapy—Vol. 1 Page 263 for general discussion of antityphoid vaccination.
- (2) Med. War Manual I Page 19 Army method of vaccination.
- (3) Osler—Practice of Medicine Cyanosis Index Page 1165, Enterogenous Cyanosis Pages 758-759.
- (4) Vaughan—Protein Split Products in relation to immunity and disease. Bacterial poisons

Pages 125-127, and 136, Protein sensitization Page 214, Vaccines and sensitization Page 436.

- (5) Hiss and Zinsser book of Bacteriology, Staphylococcus toxins

Page 328—Typhoid Toxins Page 416.

- (6) Report of Dr. F. A. Coward, Director of Laboratory, South Carolina State Board of Health on Antityphoid Vaccine, Lot 67.

MINUTES

MINUTES OF THE FIRST SCIENTIFIC SESSION SOUTH CAROLINA MEDICAL ASSOCIATION FLORENCE, S. C., APRIL 16th, 1919.

The meeting was called to order by the President, Dr. James A. Hayne, at 100 A. M.

DR. HAYNE: The South Carolina Medical Association will come to order and listen to the Invocation by Rev. W. S. Poyner.

Divine Invocation

REV. DR. W. S. POYNER Florence: Almighty God, our Heavenly Father, who art the author of all being and the fountain of all wisdom and knowledge, we come to Thee this morning as a body, a profession of men and women, and as Thy humble servants, acknowledging and confessing our sins unto Thee, sins that we have committed sins of omission and sins of commission, sins of thought and sins of neglect; and we pray Thee that Thou wilt assist us. Remember Thy promise that Thou art faithful and just to forgive us our sins. We come to Thee as a body of Thy servants, this morning, with hearts full of gratitude to Thee for having preserved our lives to this day, for the privilege of assembling ourselves together for the good of our fellow men; and we pray that Thou wilt defend us against all dangers, keep us out of all sin, and grant that this day all our doing may be acceptable in Thy sight.

We pray Thee that Thou wilt hear us, as we come, acknowledging our need of Thee, as a body of men going about trying to do good here and there, we put our whole trust and confidence in Thee. We pledge Thee our love and our co-operation in the relief of suffering among men and women. We ask that Thou wilt give us Thy guidance and direction, and pray that Thou wilt pour out on these, Thy servants, something of Thy wisdom and a portion of Thy love; that as they go about their work, they may be led by Thy spirit to do the things that are right and to take up that sacred

responsibility entrusted to them in the lives of men and women who commit themselves to their keeping.

We pray that Thou wilt direct them in all their doings with Thy most gracious favor and Thy continual help; that in all their works begun, continued and ended in Thee, they may glorify Thy holy name, Amen.

DR. HAYNE: I take great pleasure in introducing Mayor H. K. Gilbert, of Florence, who will deliver the Address of Welcome. (Applause.)

ADDRESS OF WELCOME

By Mayor J. K. Gilbert, Florence

MR. PRESIDENT, LADIES AND GENTLEMEN: It was indeed a great honor that you conferred upon Florence in coming here for your annual convention; and I wish that it were in my power this morning to express to you the appreciation that I feel of your presence among us. But I am glad to be able to believe, gentlemen, that any expression of welcome from me is entirely superfluous. I am glad to say this, because I know the people of Florence. I have lived among them a long time, and I am one of them; and I am proud to say to you that I believe that you have already realized that you were dwelling in an atmosphere of hospitality, although you have been with us only a short while.

We welcome you to Florence, because we believe in you; and we believe in you, because you are benefactors of the human race. Of all professions known to man, there is none more worthy of praise or more honorable than that of the physician, the man who dedicates his life to the service of his fellow men and devotes the best years of life to the relief of human suffering and to the giving of happiness, when this is possible. Service is the greatest thing in the world to-day, and the world owes more to the medical profession than to any other. Only a few

years ago, many of the ailments common to man were looked upon with horror and dread. When they seized upon us, we knew nothing but despair. We had no hope. We knew not what to do. To-day, things are vastly different. The ailments that we dreaded are now looked upon as mere trifles. What is the reason? It is because of the untiring efforts of the medical profession. While the balance of the world was busy pursuing wealth and worldly honor, and other things, the faithful physician was busy searching into the past, looking into the future—early in the morning, late at night, day by day, month after month, year after year, trying to find some means for the relief of suffering humanity, that he might be able to restore to health some suffering creature and thereby bring happiness and good cheer to the heart of some waiting mother, some anxious wife, some loving father, or some little child.

We are glad to welcome such men. You are welcome to everything we have, and then some. If we have failed to do anything already, simply ask us for it. We hope that when you go away, you will carry with you pleasant memories that may linger with you for many years and be a compelling force to turn your steps back to Florence before a great while. If a kind Providence should decree otherwise, and we do not meet here again, we are sure that we shall meet in the presence of the Great Physician, whose example you are so nobly emulating.

I again express good wishes and hopes that you may have a most pleasant and profitable session. (Applause.)

DR. HAYNE: I take great pleasure now in presenting to you Dr. F. K. Rhodes, whom you all know, President of the Florence County Medical Society, who will deliver an Address of Welcome from that organization.

ADDRESS OF WELCOME

By Dr. F. K. Rhodes, President of the Florence County Medical Society.

MR. PRESIDENT MEMBERS OF THE STATE MEDICAL ASSOCIATION, AND FRIENDS: Our Mayor has just welcomed you to our city, so it only remains for me to endorse what he has said. It is a pleasure and honor to the Florence County Medical Society to have you as our guests, and we trust that your memory of the occasion may be such as to lead you to want to come back soon. In fact, we should like to have you every

year; and I take this opportunity to invite you to make Florence your annual meeting place; and, on behalf of the Florence County Medical Society, I greet you all most cordially.

DR. HAYNE: The President-Elect will make the Response.

RESPONSE TO ADDRESSES OF WELCOME BY DR. E. W. PRESSLY OF CLOVER

When the maples wave their crimson banners in every passing breeze, when the violets bare their warm and dewy bosoms to the morning sunbeams, when every peach and apple and pear tree is a huge bouquet, when every hillside is white with the snowy blossoms of the dogwood, when from many a fence and many a trellis the wisteria swings its purple clusters, when the roses flaunt their petals of crimson and alabaster and gold for the pleasure alike of the pauper and the millionaire, when from the topmost twig of the apple tree in the orchard the mocking bird sits and sings to its mate, in notes with "many a winding bout of linked sweetness long drawn out," of the little nest in a flower-flecked meadow or on a sun-kissed hillside that makes up their land of "hearts desire," when day by day the earth is being carpeted with verdure and the heavens garnished with gladness, then it is springtime in Carolina and while it is possible that the sun in his daily circuit looks upon another land as fair and another season as gracious, yet a fairer land and a more gracious season has he never seen in the six thousand years of his journeyings nor will he see any such during all the remainder of his journeyings through all the cycles of coming time.

And in no portion of Carolina has nature spread her beauties and glories with a more lavish hand or a more gorgeous coloring than in this portion, the Pee Dee.

Nor has nature here confined her glories to inanimate things. The sons and daughters of the Pee Dee have long been known and famous, not alone here, but in other sections as well. We, at the foot of the mountains, claim part of the glory of your great names.

As I came down on yesterday and saw the remnants of your "forests primeval hoary with age and bearded with moss," I thought of Marion and Sumter and the heroes who under their banners made their homes in these forests and from them fought till the foot of the invader was driven from our soil.

And I thought too of your great names in the medical profession who have gone

before. Of Evans and Brassard and Baker and the others all faithful to their duty as God gave them to see that duty. "From their frail tenements of clay your spirits, long divorced, are present here today." "Daily the tides of life go ebbing and flowing beside your long resting places; thousands of throbbing hearts, but yours are still; thousands of scheming brains, but yours are quiet; thousands of busy fingers, but yours are at rest forever; thousands of weary feet, but yours have completed the journey." No word of yours comes to us from the "tongueless silence of the dreamless dust." but your influence still remains to help and guide us. *Fratres amati te salutamus.*

Then, yesterday, and last evening, on the street and at the home of our good friend, Dr. McLeod, I thought of how Florence "puts it over" our early kinsman, Adam. Adam, all in all, had a pretty nice thing. He didn't have to worry with the Bolsheviks, he didn't have to trouble himself with thoughts of pro-Germans, and their psychical phantasmagoriae, the high cost of living did not disturb his rest, nor did he have to worry over how Pollock was going to vote on the suffrage amendment. In addition to these negative advantages he had his abode in a garden. Through that garden and past his abode streamlets, crystal clear, bubbled and babbled and laughed as they ran over their beds of golden gravel, watering that garden and making it rich to grow. All around his abode bloomed flowers of brighter hues and more exquisite perfumes than the roses of any succeeding June have ever attained. Daily walking in that garden in the rosy dawn and purple twilight and harkening to the silvery symphonies of celestial anthems, he heard music sweeter than a poet's dream and softer than was ever breathed from Aeolian harp, wind-swept in Thessalian caves. His cheek and brow were fanned by zephyrs gentler than those that told to the world-seeking Columbus that the Indian isles were nigh when the land wind over wood of palm, and orange groves and fields of balm blew o'er Haytian seas.

While, with each opening of the gates of day, he saw the rose and amber of a thousand of our most glorious mornings, and with their closing he saw the purple and gold of a thousand of our most gorgeous evenings as the sunrise and the sunset unfurled their bannered splendors and swung them athwart the morning and the evening sky before his enraptured vision. Surely he had a pretty good place, and yet that great old Puritan poet, Milton, describes him as a lonely, moody man.

"His prospect seemed a wilderness,

His garden just a wild;

And man, the lonely hermit, sighed
Till a companion smiled."

Then what a change. From that moment the long vista of the coming to-morrows, as our earliest progenitor gazed adown them, seemed radiant with the rainbow glories of coming triumphs, redolent with the perfumes of Araby, and strewn with joys more thickly than the dells of Vallombrosa with leaves. And yet there was in all his world but one Eve, while in Florence, today, as our eyes have seen, they are many in number and delightful in character. Eves of a gayer chatter and a brighter and more voluminous raiment than ever enthralled the ear and delighted the eye of our original kinsman.

Are we glad to be here with you? Is the little mother of the Pee Dee glad to get the letter, long overdue, that tells her that her son, battling for home and civilization on a foreign soil, is still safe and well? Is the parched and thirsty vegetation, at the end of a long July drought, glad to feel the refreshing rain drops that tell of abundance of moisture? Is the thirst-stricken traveler in the desert glad when he reaches an oasis with waving palms and cooling shades with babbling brooks and crystal pools? Is the sight of stars and skies, and open spaces, and freedom, welcome to one long immured in a dungeon? Well, so in kind, and so in quantity, are we glad to be in this hospitable community, and when we leave we will not say "goodbye," but, "God be with you till we come back."

DR. HAYNE: Ladies and Gentleman, I feel like an anti-climax after this oration; but it has to be done. So be patient.

Dr. Hayne read his Presidential Address, which was as follows: [Published in April Journal.—Ed.]

The President's Address was greatly applauded.

It was moved that this most interesting and instructive address be given to the public press for publication. The motion was seconded by several and carried. The reading of papers on the regular program was then taken up.

MINUTES OF THE HOUSE OF DELEGATES OF THE SOUTH CAROLINA MEDICAL ASSOCIATION

Seventy-First Annual Meeting,
Florence, S. C.,

April 15 and 16, 1919.

Morning Session

The meeting was called to order at 10:15 A. M. by the President, Dr. James A. Hayne, of Columbia.

DR. HAYNE: Gentlemen, the first

business will be the appointment of the Committee on Credentials. The Chair will appoint the following:

Dr. E. W. Carpenter, of Greenville.

Dr. W. A. Tripp, of Easley.

Dr. W. P. Timmerman, of Batesburg.

This Committee will immediately proceed to give us a roll of the House of Delegates, looking into their credentials.

(A short recess until 10:40 then took place).

DR. HAYNE: The House of Delegates will come to order and hear the Report of the Committee on Credentials.

DR. TIMMERMAN: The Committee begs leave to submit the following report. Any that are present will please respond when I call their names. (The Chairman of the Committee then called the roll, and the following responded:

The following delegates were present:

J. S. Palmer.

Thos. Pennell.

G. A. Neuffer.

H. J. Stuckey.

E. C. Baynard.

K. M. Lynch.

J. S. Rhame.

R. M. Pollitzer.

Robt. L. Gardner.

J. H. Taylor.

N. B. Edgerton.

G. H. Bunch.

H. W. Rice.

T. J. Davis.

R. A. Marsh.

Frank H. McCleod.

S. R. Lucas.

W. C. Black.

J. W. Jervey.

P. G. James.

E. W. Carpenter.

Huger Richardson.

W. T. Dunn.

J. J. Wingard.

C. R. May.

W. J. Dunn.

P. G. Ellisor.

J. S. Stribling.

Walter Cheyne.

H. M. Stuckey.

S. O. D. Lancaster.

Baxter Haynes.

J. R. Miller.

J. I. Barron.

DR. HAYNE: Gentlemen: You have heard the report of the Committee on Credentials. What is your pleasure as to what shall be done with the report?

It was moved and seconded that the report be adopted. Carried.

Dr. HAYNE: The next business before the House is the Report of the Secretary-Treasurer.

The Report of the Secretary-Treasurer was read by Dr. E. A. Hines of Seneca, and was as follows:

REPORT OF SECRETARY-TREASURER

1918 was the most momentous year in all history and organized medicine was put to the supreme test. The members of the South Carolina Medical Association responded to every demand promptly and efficiently and our record stands second to none in patriotic service.

The roll of membership at the close of the fiscal year December 31st, 1918, was 692, practically normal and due entirely to the wisdom of the Constituent County Societies in paying the dues of all members in Government Service.

It was with the keenest sorrow that your Secretary found it necessary to transmit to the Necrology Committee the names of many of our members who fell at the post of duty during the recent influenza epidemic.

Owing to war conditions the scientific meetings of the County and District Societies were greatly handicapped, except the societies in the vicinity of the military camps. Some of these did excellent work reports of which appeared in the Journal from time to time. It is gratifying to report that a new County Society—Alledale—will apply to the House of Delegates for a charter at this meeting.

Your Secretary was called upon to serve in numerous capacities throughout the period of the war. To mention the more important: He served as the Medical Member of the District Exemption Board of the Western District of South Carolina. Was a member of the State Committee Medical Section Council of National Defense, serving as assistant Secretary and Secretary of the same. Another work of some magnitude was the secretaryship of the Volunteer Medical Service Corps, involving the enrollment of every doctor in the State for war service and personally assisting the Council of National Defense, Medical Section, Washington, D. C., in this classification.

This matter is alluded to to emphasize the opportunity which the South Carolina Medical Association has enjoyed to serve the entire profession, the State and the nation and leads to the observation that now is the time to build for a future hitherto undreamed of.

Several hundred of the most promising physicians in South Carolina responded to the call to the colors, now they are coming back again imbued with the spirit of co-operative effort and we should maintain an active virile organization in order that no time shall be lost in profiting by their enthusiasm and experience.

It would appear that some action should be taken by this House of Delegates to reorganize the Sims Memorial Committee since the death of the Chairman Dr. S. C. Baker removes the originator of the proposition and the most forceful member of the Committee.

The financial report of the Treasurer follows:

Report of Dr. E. A. Hines, Treasurer of
The South Carolina Medical Association
for Year Ending December 31st,
1918:

Seneca, S. C.,
March 29th, 1919.

Dr. E. A. Hines, Secy-Treas., South Caro-
lina Medical Association, Seneca, South
Carolina.

Dear Sir:

In accordance with your instructions,
I have audited the books and accounts of
the South Carolina Medical Association
and attach hereto statement, made in the
form of your Annual Report to the Asso-
ciation, which exhibits the Receipts and
Disbursements for the year ending De-
cember 31st, 1918, also a statement of the
assets of the Association, there being no
liabilities.

Respectfully,
SYDNEY BRUCE,
Auditor.

Report of Dr. E. A. Hines, Treasurer of
South Carolina Medical Association for
the Year Ending Dec. 31st, 1918:

RECEIPTS:

Balance on hand Jan- uary 1st, 1918....	\$ 248.85
Annual Dues:	
Anderson County Medical Society ..\$	90.00
Aiken County Medi- cal Society	24.00
Abbeville County Medical Society ..	14.00
Barnwell County Medi- cal Society	20.00
Bamberg County Medi- cal Society	28.00
Beaufort County Medi- cal Society	2.00
Charleston County Medical Society ..	154.00
Colleton County Medi- cal Society	24.00
Columbia Medical So- ciety	156.00
Chester County Medi- cal Society	36.00
Darlington County Medical Society ...	28.00
Dorchester County Medical Society ..	26.00
Edgefield County Medi- cal Society	30.00
Florence County Medi- cal Society	42.00
Georgetown County Medical Society ..	10.00
Greenwood County Medical Society ..	43.00
Greenville County Medical Society ...	120.0
Kershaw County Medi- cal Society	24.00
Lexington County Medical Society ...	16.00

Laurens County Med- ical Society	36.00
Lancaster County Medical Society ..	10.00
Lee County Medical Society	18.00
Marion County Medi- cal Society	20.00
Marlboro County Medical Society ..	26.00
Newberry County Medical Society ..	32.00
Orangeburg County Medical Society ...	26.00
Oconee County Medi- cal Society	30.00
Pickens County Medi- cal Society	42.00
Saluda County Medi- cal Society	22.00
Sumter County Medi- cal Society	50.00
Spartanburg County Medical Society ..	102.00
Union County Medi- cal Society	18.00
Williamsburg County Medical Society ..	26.00
York County Medi- cal Society	44.00
	----- \$1,389.00
Miscellaneous Items:	\$1,637.85

DISBURSEMENTS:

Salaries	\$1,250.16
Office Expense	18.25
Stamps	45.00
Travelling Expense ..	62.50
Sten. Report of State Meeting	156.84
Miscellaneous	45.00
Bal. Cash on Deposit with Seneca Bank .	59.60
December 31st, 1918	\$1,637.85
Special Funds of South Carolina Medical Association, Dec. 31st, 1918.	
Fund for Prosecution of Illegal Practit- ioners:	
Balance to credit of Account Janu- ary 1st, 1919	\$145.35
Sims Memorial Fund:	
Balance cash on hand January 1st, 1919	50.00
Norwood Memorial Fund:	
Balance cash on hand January 1st, 1919	7.25
Collected from Association Members	118.00
Balance cash on hand January 1st, 1919	125.25

Statement of Assets

Cash on deposit with Seneca Bank to credit of Association	\$ 59.60
Cash on deposit with Seneca Bank to credit of Special Funds....	320.60
Office Furniture and Equipment..	220.00

I hereby certify that the foregoing
statement of the South Carolina Medical
Association, showing receipts and dis-

bursements, balances to credit of Special Funds and statement of assets and equipment, are correct as shown by their books as at December 31st, 1918. I have verified the credit of each of the Special Funds and of the Association at the Seneca Bank, Seneca, S. C., and find same to agree with amount shown by books of the Association.

SYDNEY BRUCE,
Auditor.

DR. HINES: (After having read some more of the report):

The Sims Memorial Funds has fifty dollars. The Legislature has a standing offer of five thousand dollars to us, when we duplicate that amount, for the erection of the Sims Memorial. That was enacted into law some years ago. We have to get five thousand dollars, in order to claim the other five thousand.

I, as Treasurer, loaned the Committee money to erect the Norwood Memorial Monument. It was to be paid later by the Society.

The money is now about in hand, and the note will be paid off.

The Report of the Journal will be presented by the Chairman of the Council, Dr. Baker, at the proper time.

DR. HAYNE The Report of the Councilors is now in order, and will be presented by the Chairman, Dr. A. E. Baker, of Charleston.

Report of the Chairman of Councillors to the House of Delegates
(A. E. Baker, Charleston).

According to the program, the State Councillors were in session last evening, and have the following report to submit to the House of Delegates:

Dr. Hines, Editor of the Journal, gave a detailed and full report on its scientific and financial condition, which was most excellent and showed every evidence of careful and personal administration. However, he stressed the fact that the Associated Editors of the Journal were not as active in contributing to the Journal, as was needed, he also suggested and urged, for the interest and good of the Journal, that scientific proceedings of the County Medical Societies in the State, be sent to the Journal for publication. The Council especially asked that this request be complied with.

In regard to the financial strength of the Journal. It is most gratifying. I will read to you the audited report, which gives the receipts and disbursements of the business done last year, also the assets of the Journal. You will notice there are no liabilities. (Following is the report of Dr. E. A. Hines, Editor of the Journal of The South Carolina Medical Association).

Report of Dr. E. A. Hines, Editor of The Journal of The South Carolina Medical

Association. For Year Ending December 31st, 1918:

Seneca, S. C.,
March 29th, 1919.

Dr. E. A. Hines, Editor, The Journal of the South Carolina Medical Association, Seneca, S. C.

Dear Sir:

In accordance with your instructions, I have audited the books and accounts of the Journal of the South Carolina Medical Association and attach hereto statement, made in the form of your Annual Report to the Association, which exhibits the receipts and disbursements for the year ending December 31st, 1918, also a statement of the assets of the Journal, there being no liabilities.

Respectfully,
SYDNEY BRUCE,
Auditor.

Report of Dr. E. A. Hines, Editor of the Journal of The South Carolina Medical Association.

RECEIPTS:

Balance cash on hand January 1st, 1918	\$ 498.57
Subscriptions	700.00
Advertising	1,803.28
Interest on Certificate	60.00
	<hr/>
	\$3,061.85

DISBURSEMENTS:

Salaries	\$1,075.04
Printing	1,017.71
Office Expense	69.68
Miscellaneous items	84.50
	<hr/>
	\$2,246.93

Balance cash on deposit with Seneca Bank	814.92
	<hr/>
Dec. 31st, 1918	\$3,061.85

STATEMENT OF ASSETS:

Cash deposit with Seneca Bank.	\$ 814.92
Office Furniture and Fixtures..	172.50
Certificate of deposit, Seneca Bank	1,000.00
	<hr/>
	\$1,987.42

Itemized Statement of Subscriptions by Counties:

Anderson County Medical Society.	\$ 45.00
Aiken County Medical Society..	12.00
Abbeville County Medical Society.	7.00
Barnwell County Medical Society.	10.00
Bamberg County Medical Society..	14.00
Beaufort County Medical Society.	1.00
Chesterfield County Medical Society	6.00
Charleston County Medical Society	77.00
Colleton County Medical Society.	12.00
Columbia Medical Society	78.00
Chester County Medical Society..	18.00
Darlington County Medical Society	14.00
Dorchester County Medical Society	13.00
Edgefield County Medical Society	12.00
Florence County Medical Society.	21.00

Georgetown County Medical Society ..	5.00
Greenwood County Medical Society	19.00
Greenville County Medical Society	60.00
Kershaw County Medical Society.	12.00
Lexington County Medical Society	6.00
Laurens County Medical Society.	18.00
Lancaster County Medical Society	5.00
Lee County Medical Society	9.00
Marion County Medical Society..	10.00
Marlboro County Medical Society	13.00
Newberry County Medical Society	16.00
Orangeburg County Medical Society	13.00
Oconee County Medical Society ..	15.00
Pickens County Medical Society..	21.00
Saluda County Medical Society ..	11.00
Sumter County Medical Society ..	25.00
Sumter County Medical Society..	25.00
Spartanburg County Medical Society ...	50.00
Union County Medical Society...	9.00
Williamsburg County Medical Society ..	13.00
York County Medical Society....	22.00
Subscriptions from non-members	8.00
	<hr/> \$ 700.00

I hereby certify that the foregoing statement of the receipts and disbursements and the statement of assets for the year ending December 31st, 1918, are correct as shown by the books of the Journal of the South Carolina Medical Association as at that date.

SYDNEY BRUCE,
Auditor.

Great credit is due Dr. Hines for bringing the Journal up to this financial standing. When he took charge of it, it was considerably in debt. Now it has nearly \$2,000.00 to its credit and no outstanding debt or liabilities.

The report of each Councilor, for his district, showed a decrease in scientific work, as well as the meetings held, due to war conditions. The Councilor from the Sixth District presented proceedings taken against an illegal practitioner which will be read before the House of Delegates for their action.

Report of the First Medical District. By (A. E. Baker, Charleston).

I beg to submit the following report for the First Medical District, which is composed of five counties, Berkley, Beaufort, Charleston, Colleton and Dorchester. With the exception of Charleston, these counties have discontinued their scientific work during the last year because of war conditions, most of their active physicians being at the front.

Charleston Medical Society has been most active in her scientific and research work, having a well attended meeting every two weeks, a paper by an appointed essayist read. Also one or more doctors

appointed to make reports of interesting cases which may occur in their practice. The best of co-operative spirit exists among the members.

I am sorry to say that four of these have had no meetings, no medical society gatherings, during the last year. The Charleston Medical Society, however, has been very active, and has held two scientific meetings a month, which were well organized and well attended, and at which the discussions were good. In other words, it is the most live medical association that I know of anywhere, not only in this, but in any other State. (Applause.)

DR. HAYNE: We will now have the Report of the Councilor of the Second District, Dr. J. S. Matthews, of Denmark.

Report of the Councilor for the Second District.

ER. MATTHEWS: I am sorry that we have not Charleston County in our district. It is composed of the counties of Allandale, Bamberg, Barnwell, Orangeburg and Calhoun.

Allandale, the newest county in the State, promptly organized a medical society, and will apply for membership at this session. Bamberg County Medical Society has had several meetings, but they were not like the Charleston meetings. Bamberg County supplied two doctors for the army and lost two promising members during the epidemic of influenza.

Barnwell County Society has not had a meeting during the year. This society furnished one man for the army.

Orangeburg furnished five men; Calhoun, none at all.

I have not been able to get around as well as formerly, on account of the epidemic of influenza. I hope for better things in the future. I thank you.

The Secretary: Mr. President, what I am going to say comes under the head of Dr. Matthews's report. The Allandale County Medical Society has applied, in due form, for a charter, with a sufficient list of names, organization, etc.; so I move that the House of Delegates grant a charter to Allandale County Society. (The motion was seconded.)

ER. HAYNE: You have heard the motion. All in favor say "Aye." Those opposed, "No." The "ayes" have it, and it is so ordered.

We will now have the report of the Councilor from the Third District, Dr. T. L. W. Bailey, of Clinton.

DR. BAILEY: Gentlemen of the House of Delegates, I beg leave to submit my report of the Third District, which is composed of five counties.

Owing to the great national events, the Third District has not been able to work.

**Report of Third District
(T. L. W. Bailey).**

Mr. Chairman:

I beg to submit my report of the Third District. Owing to the current and national events the Third as is with others has not been able to make the ordinary efficiency in its work as at normal times. All the counties, however, maintain their organizations except McCormick, the baby county, only two years old and is not able yet to walk, but by persistent care and proper nursing we believe it will grow up to useful manhood.

We have not been able to have a District meeting during the past year, but prospects are good for this year. We lost two very excellent fellows, Dr. O. B. Mayer and Dr. W. E. Pelham of Newberry. Others have not yet returned from service, and the line is still broken.

The spirit of harmony and fraternalism is a feature that prevails in our district, and it should be the spirit that should prevail in the entire Association.

Now that we look to the East and see a beacon light, we grasp a new vision, we are seized with an inspiration and we go forward with a new zeal for the uplift and betterment of mankind.

DR. HAYNE: The report of the Councilor from the Fourth District will now be presented by Dr. L. O. Mauldin, of Greenville.

Report of the Councilor for the Fourth District.

DR. MAULDIN: Mr. President and Gentlemen: In presenting my report from the Fourth District, composed of five counties, Anderson, Greenville.

I will say that every medical society in the district is entitled, on account of the influenza epidemic, to an excuse. It has been impossible to have a regular attendance at every meeting. I visited every county but one on the regular time and day of meeting, and found an encouraging state of affairs in most. In many, quite a number of the members were sick; and those that were not sick, were unable to come. So many did not have meetings, especially during the influenza epidemic. Careful inquiry into the workings of the societies revealed the fact that every society was in good working order and doing splendid work as a medical organization. In making my report for the Fourth District, I will say that every County Medical Society in the District is intact.

On account of the influenza epidemic the time and energy of every physician has been taxed to the utmost, and it has been impossible to have regular attendance at every meeting.

I have visited every County Society, except one, on the regular time and day of meeting, and found encouraging and en-

thusiastic meetings in those societies I visited before the onset of the influenza. But those I visited after the influenza epidemic began to rage, quite a number of individual members were sick, and those who were not sick were so busy answering calls that no meeting could be held.

Careful inquiry into the meritorious workings of each society, revealed the fact that every society is in good working order, and doing splendid work in its capacity as a medical organization.

DR. HAYNE: The next is the report of the Councilor from the Fifth District, Dr. M. J. Walker, of Yorkville.

DR. JOHN I BARRON, Yorkville, Dr. Walker has just been called on the long distance telephone, and has asked me to present this report. (Read Report of the Councilor from the Fifth District.

**Report of the Councilor—Fifth District
M. J. Walker**

MR. PRESIDENT:—This has been a dull year in the county societies. The fifth district has been very much disorganized by the loss of so many active members who answered their country's call.

York county was especially hard hit, only two doctors being left at the county seat. The demand for doctors was so great during the influenza epidemic that with the consent of the county society we allowed Doctor Russell, a colored doctor, who had not passed the State Board to practice until his services were no longer needed.

I do not know of an illegal practitioner in the Fifth District.

Conditions at Winthrop College have been corrected. Dr. Saunders has been in charge and I think has done splendid work. I am very much afraid that the country remote from town will continue to suffer from the scarcity of doctors. I do not think the men who resided in the country will return to their old fields after the war.

I would suggest that the State society select a good man this summer and have him travel three or four months with the councilor of each district and visit each county and arouse as much enthusiasm as possible to increase the membership. It has been almost impossible to get the members to attend the meetings of the county society.

The scarcity of doctors and the influenza situation have kept the doctors so busy they could not attend.

Respectfully submitted,

DR. HAYNE: The report of the Councilor from the Sixth District, Dr. C. R. May, of Bennettsville. (Dr. May read the report.)

Report of the Councilor for the Sixth District

The Sixth Councilor District comprises the counties of Marlboro, Chesterfield, Darlington, Florence, Marion, Dillon and Horry, in all of which there are organized societies doing good work. Our district society is known as the Pee Dee Medical Society, and is, I understand, the second oldest society in the State, the South Carolina Medical Society of Charleston being the oldest. Meetings of this Society are held annually. They are well attended, and are full of scientific and social interest.

I have not been able to attend the various County meetings, largely because I expected to do so in the autumn, but during this time the epidemic of influenza and the prolonged and serious illness of myself and family have deprived me of this pleasure. I have a report, however, from all of the societies.

Marion County has 11 members out of 13 doctors in the County, and one of these has applied for membership. Their meetings will hereafter be held monthly.

Horry County has 11 members out of 12.

Chesterfield County has 7 members.

Marlboro County has 13 members, and Darlington and Florence have kept their organizations up. Florence having a membership of 20 odd.

All of these societies report that their work during the past year has been largely handicapped by the absence of men in service and overwork of those at home, but all of them are optimistic as to the outlook for greater accomplishment during the coming year.

In Florence County there is one illegal practitioner, Covington Lee of Cowards. Many efforts have been made to stop him from practicing, but owing to some local political conditions the grand jury refuses to indict him. We have had our attorney to prepare a resolution which those who have interested themselves in the matter, think if adopted will probably find a way to stop this man from his illegal practice.

DR. MAY: This, as I understand it, was approved at the Council meeting last night.

DR. HAYNE: Gentlemen, you have heard the reading of this resolution and report. What is your pleasure?

DR. W. A. TRIPP, Easley: I move that it be adopted.

DR. G. C. KNIGHT, Barksdale: I move that the resolution be read again by the Secretary.

The motion was seconded and carried, and the motion was read again.

DR. HAYNE: You have heard the reading of the resolution. Is there any discussion.

DR. F. H. McLEOD, Florence: They said that they were unable to convict

him. They had presented the matter to the Grand Jury, and, owing to political conditions, they brought in no bill. They have all kinds of evidence. He says that he has attended Baltimore Medical College, while the records there say that he has never attended it. He has never even applied to the State Board of Examiners. He has registered a certificate of graduation obtained falsely at the office of the Clerk of Florence County. Two weeks ago, he was indicted again; and numerous people testified against him. But the Grand Jury, I am much ashamed to say, brought in no bill. We had an injunction in the 12th District, in which he resides. We had to take action on this matter; and after a conference between our attorney and the Attorney General of the State, we find that our attorney believes that the Attorney General can and will get an injunction from the Supreme Court that will settle our difficulties. I move the adoption of the resolution.

DR. WALTER CHEYNE, Sumter: MR. PRESIDENT, I will second that motion. I believe that there is not a legal way of getting the man under the present law; but it will bring to the attention of practitioners, and also to the attention of the Attorney General, the fact that there is not an adequate law. When we failed to get an indictment by the Grand Jury, the prosecution stopped. This, however, will take the local aspect away from the case; and it will be the only way in which we can render the proper service, even if it does not accomplish the result immediately.

DR. W. S. LYNCH, Scranton: The Grand Jury asked a number of questions regarding Dr. Lee. They raised the question that he had been practicing medicine so long, that the law we have now will not have any effect on him; that is, ten years, and he has been practicing twenty-five years. The Grand Jury seemed to think that the law we have now was enacted since the time that he had come into practice, and said that this is one reason why they did not take this matter up.

DR. McLEOD: I should like to ask what Dr. Boozer has to say about the matter.

DR. A. EARLE BOOZER, Secretary, State Board of Medical Examiners, Columbia: The records of the office of the State Board of Medical Examiners are substantially as stated in the resolution. That is, we have no record at all—no record that he ever applied, no record that license has ever been issued to him. I appeared before the Grand Jury twice, I think. They had me here at Florence, and I brought the records with me. I went before the Grand Jury and told them that Dr. Lee's name was not on the record or books and that we had never issued a license to him, therefore that he

had no right to practice, but as Dr. McLeod states, they promptly brought in no bill.

DR. HENRY STUCKEY, Sumter: You remember that there was an interval of time when you only had to present a diploma to the Board of each county, from a reputable medical college. It was put on record in the Clerk's office. At that time Dr. Lee got the forged diploma and registered it with the Clerk. I do not know how many years there was no Board of Medical Examiners. It was abolished for two or three years, twenty-five or twenty-seven years ago.

DR. TRIPP: In 1904, the Compromise Medical Bill was passed, legalizing the practice of medicine. At that time, it was stated that all who had been practicing medicine before 1904 for five years were required to register a diploma. The present license was created in 1904. It got the first license ever issued. When the Compromise Bill was put on the calendar from the members of the Association and the Charleston Medical College, Mr. Richardson got inserted into it the provision that men who had been practicing for five years prior to the enactment of that law should register a diploma. If Dr. Lee has done that and has been practicing five years longer, he is a legal practitioner and you cannot interfere with him. Petitioning the Attorney General will be of no value at all, although I am willing to vote for the resolution.

DR. E. W. CARPENTER, Greenville: It seems to me that the question is whether the diploma that Dr. Lee has presented is a fraudulent diploma or not. I remember that this man went to the Charleston Medical College. I do not think he attended the senior year, but he turned up with a diploma from the Baltimore school. That was a fraudulent diploma, and he has not complied with the law.

DR. McLEOD: I should like to say that we are absolutely sure of our ground. He has no legal preference to practice. He has a fraudulent diploma and a fraudulent certificate from the State Board of Examiners. He has not practiced the time limit. He has no excuse at all to practice.

DR. TRIPP: If Dr. McCleod is right in his assertions that Dr. Lee has no diploma, it seems that the first thing should be to present this man for fraud and put him in the penitentiary. The lawyers here can convict him of fraud. His crime is not illegal practice, but fraud.

DR. WALTER B. LANCASTER, Spartanburg: A similar case was brought before our County as regards a member. In April the practice of medicine in Spartanburg County was invested in the County Board and I was appointed on the County Board. That was in 1889. To show you how things went, about, I

wrote to Dr. R. A. Kinloch, of the Medical College of South Carolina, about this illegal practice of medicine. The law says that he must have a diploma from a reputable medical college. I asked for a list of reputable medical colleges of the United States, and he wrote me that there was no such list in existence. Every member of Spartanburg's Medical Society at that time, every man in the County Society at that time, knew that this negro was admitted to the practice of medicine from Shaw University, in North Carolina. He had no diploma.

DR. THOMAS P. KENNEDY, Union: I am heartily in favor of the resolution; but if this fellow has not his name on the list of graduates from the Baltimore Medical School, and has his name on the list of qualified practitioners of this State on a false diploma from that school, the only thing to do is to indict him for fraud.

DR. HAYNE: Is there any further discussion? Are you ready for the question? The question before the House of Delegates is the adoption of this resolution.

DR. JOSEPH S. STRIBLING, Seneca: I wish to offer an amendment to the resolution: That you indict the man for fraud in forging a certificate from the Board of Medical Examiners, and especially in forging a diploma from the Baltimore Medical College; and also for perjury in the oath that he made on registration. When the man began to practice, in 1888, the law was that he should take the diploma to the Clerk of the Court and swear that it was his own diploma; and that then a certificate would be given him. If he had sworn falsely, he would be amenable to the laws of South Carolina for perjury. If you do that, I think you will get him.

DR. C. R. MAY, Bennettsville: A bill was brought in, and we will undertake to make that fraudulent indictment. All we ask is that this resolution be adopted by the South Carolina Medical Society. We will then see what we can do. If you want to indict him for fraud, very well.

DR. W. A. TRIPP, Easley: Is the amendment open for discussion?

DR. HAYNE: It has not been seconded.

DR. MAY: Mr. President, I am not discussing the resolution; but I want to read some of it.

If Dr. Lee is not practicing medicine unlawfully, the Attorney General cannot do anything, but if he is doing so, the Attorney General can take any measure he pleases.

The question was called for.

DR. HAYNE: All in favor of the adoption of this resolution will signify it by rising. All opposed will do the same. The resolution is unanimously adopted.

The next is the Report of the Coun-

cilor from the Seventh District, Dr. S. E. Harmon, of Columbia. Is he present? He was here. We will pass on the Report of the Scientific Committee.

Oh, I forgot the Report of the Councilor from the Eighth District, Dr. W. P. Timmerman, of Batesburg.

Dr. Timmerman read this report, which was as follows:

The Eighth District Medical Association is compounded of the Counties of Aiken, Edgefield, Saluda and Lexington. I regret to report that interest in the county and district societies is not what it should be. Aiken County has twenty-two doctors but unfortunately the society is inactive and seems dormant. She has five doctors in the war service some of whom were in France. Dr. R. M. Hammond of Montmorenci one of her most prominent men died since our last meeting.

Edgefield County has fifteen doctors. One of whom was in the war service. One of their members Dr. W. T. Briggs, an excellent man, died during the influenza epidemic. They seem to be working harmoniously but their meetings aren't as regularly and well attended as they should be. Visits from officers of State and District societies are encouraged.

Saluda County has thirteen doctors. Twelve of them are members of the county society. Two of them were in the army service. Visits from officers of the State and district societies are encouraged and with good results. While they do not meet regularly, good fellowship is manifest. Neither of these counties has any doctors who are not legally qualified to practice.

Lexington County has twenty-five doctors. Five of them are not members of the County Society. Three of Lexington's doctors were in the war service. One of them, Dr. G. Taylor died in the service. Much of its success is due to the efficient secretary, who has been secretary for more than a decade. The society encourages visits from officers and others of the State and District Societies and with good results. The District Association failed to meet in 1918 due probably to war conditions but we expect a live association hereafter.

**Report of Councilor of Seventh District
S. E. Harmon**

Mr. PRESIDENT: In making my report of the Seventh District comprising the counties of Clarendon, Georgetown, Lee, Richland, Sumter and Williamsburg. I beg to say that I have not visited any of the county societies. My reasons were that judging from my home county society, Richland, that there being a great many of the members in service and

that those remaining at home were so over worked that they took very little interest in society and scientific work. It was very seldom that we could secure a quorum. Having all this in mind I thought it would be useless to try to attend any of the county societies in my district. I communicated and received a report from all save one. This one being Williamsburg. I made more than one effort to get a report from this county but failed.

After receiving the reports from the different societies I found that my guess was correct. That they were practically having no meetings at all with the exception of Sumter County Society. This society met monthly.

As I have indicated there has been very little if any scientific work done in any of the societies in the past year. But we promise as the condition of things and people get back to normal we will do more and better work and as your councillor of the Seventh District I promise to make greater efforts in the future.

DR. HAYNE: Is Dr. Harmon, Councilor of the Seventh District, here? If not, that concludes the Reports of Councilors, with the exception of his report. We will now have the Report of the Committee on Scientific Work, Dr. R. S. Cathcart, of Charleston, chairman. Dr. H. R. Black, of Spartanburg, and Dr. Edythe Welborne, of Columbia, are the other members of the Committee. Is there any member of the Committee on Scientific Work here who will make a report?

THE SECRETARY: Perhaps it would be well for the Secretary to give a little information at this point. At the meeting three years ago, the President recommended that the Scientific Committee be elected by the House of Delegates, instead of being appointed by the President; and that the Secretary of the State Association be not on it, so that this elected body of men would act really independently and thus give an opportunity for not so much one-man action. But war conditions came on, and the whole thing fell through. Dr. Cathcart was elected, and was able to render very little service before being called by the Government. The Committee has not, therefore, functioned at all as designed by the House of Delegates, as it was intended that it should at that time; so the scientific work has continued to devolve upon the President and Secretary, as before. Whether this plan should be continued or not, it is for the House of Delegates to decide.

DR. HAYNE: The next is the Report of the Delegate to the American Medical Association, Dr. E. A. Hines, of Seneca.

Instead of reading a formal report, Dr. Hines gave an interesting informal talk, in which he showed the practical

workings of one of the great committees of the American Medical Association. The Committee on Medical Education of which he was the Chairman.

DR. HAYNE: The next order of business is the Report of the Committee on Public Policy and Legislation, of which Dr. R. E. Hughes, of Laurens, is Chairman, the other members being Drs. H. L. Shaw, of Sumter, and W. A. Boyd, of Columbia. Are any of this Committee present? I will say that this Committee was appointed for the purpose of influencing and directing Acts of the General Assembly that would be for the good of this Association. The General Assembly was so well disposed this year towards this Association and everything connected with medicine, having had the experience of the influenza epidemic and the lack of medical attention that they had then on account of the fact that there were not enough doctors, that they were only too glad and eager to do anything that would promote the welfare of the medical men of South Carolina; so that this Committee did not have any very strenuous duties to perform.

The next Report is that of the Chairman of the State Board of Health, Dr. Robert Wilson, Jr., of Charleston. Dr. Wilson is not present, so I will ask the Secretary to read Dr. Wilson's letter of transmissal of the Report of the State Board to the General Assembly, which will probably bring out the main points of the report that he would make, if he were here.

Dr. Hines read this letter, which was as follows:

LETTER OF TRANSMITTAL

His Excellency, Richard I Manning, Governor of South Carolina, Columbia, S. C.

Sir: I have the honor to hand you herewith the thirty-ninth annual report of the Executive Committee of the State Board of Health and request that you transmit it to the General Assembly.

While the report speaks for itself I respectfully beg leave to call attention to a few matters which seem to be of especial importance.

The examinations made by the various draft boards under the selective service law have revealed a serious degree of physical deficiency among the registrants. Many of the defects found could have been remedied if discovered early in childhood. This condition emphasizes the great need for the establishment of a Bureau of Child Welfare which we urge most strongly. The functions of this bureau will include the registration of all births; the prenatal care of children; the medical inspection of school children and the establishment of clinics for correcting the defects found among school children. The

activities of the bureau would exert a far-reaching influence, strengthening the manhood and womanhood of the next generation. Surely no matter of greater importance can claim the attention of the General Assembly.

It is also the desire of the Board of Health to establish a bureau for the control of venereal diseases, the insidious operations of which more than any other, perhaps, threaten to impair the vitality of the nation. This gigantic problem has baffled the wisdom of the ages, but nevertheless our government is making a bold and serious effort along well considered lines to reach a rational solution and it behooves us to co-operate to the fullest extent of our ability.

We also urge a larger appropriation for the control of communicable diseases. Experience has demonstrated that such diseases as smallpox, diphtheria, scarlet fever, typhoid fever, epidemic meningitis, tuberculosis and all germ diseases are susceptible of control under intelligent direction. No health officer, however, can carry on such work effectively unless ample provision be made to supply necessary funds, and while our State Health Officer has done splendid work and his efforts have been rewarded by large results, he could have accomplished far more had his financial support been greater.

One of the most important steps for the control of communicable diseases is the reporting of cases which occur, and we regret to confess that the medical profession is largely responsible for placing a serious handicap upon the Health Officer by neglecting to obey the laws. The Health Officer pleads for the co-operation of the non-medical men of the State to develop an over-whelming sentiment which shall compel physicians to carry out the law.

A work of enormous value has been accomplished along lines of rural sanitation and a bill has been introduced by Congressman Lever to provide Federal aid for this work. In the meantime, however, it is incumbent upon the State to continue the work now being done for the betterment of conditions in rural communities.

It is gratifying to call attention to the splendid success of our tuberculosis sanatorium, an institution for which every citizen of South Carolina should feel justly proud. The campaign against tuberculosis is yielding results as is shown by the gradual reduction in the deaths from this disease in South Carolina.

Respectfully,

ROBERT WILSON, JR.,
Chairman Executive Committee of the
State Board of Health.

DR. HAYNES: The next is the Report of the Committee on Health and Public

Instruction, of which Dr. L. A. Riser, of Columbia, is Chairman, the others on the Committee being Dr. Vance Brabham, of Orangeburg, and Dr. L. Rosa H. Gantt, of Spartanburg.

—(No Report)

DR. HAYNE: We will now have the Report of the Committee on Study and Prevention of Tuberculosis. Dr. Ernest Cooper, of Columbia, is the Chairman of this Committee; and the other members of it are Dr. E. W. Pressly, of Clover, and Dr. Harry H. Wyman, of Aiken. Dr. Cooper is not present. Dr. Pressly, will you make the report?

DR. PRESSLY: When this program was handed to me this morning I had the first intimation that I was on that Committee.

The next is the Report of the Committee on Child Welfare. Dr. R. M. Pollitzer, of Charleston, is the Chairman; and the other members are Drs. William Weston, of Columbia, D. L. Smith, of Spartanburg, J. E. Watson, of Anderson, and K. M. Lynch, of Charleston.

The Report of this Committee was read by Dr. Pollitzer, and was as follows:

Report of Committee on Child Welfare

Inasmuch as the year had far advanced before the Committee was appointed, and because of the general difficulty in plann-

ing new work in consequence of so many reconstruction problems, it was deemed best not to undertake any work prior to this meeting. There has been some correspondence between the committeemen however, and therein the sentiment is expressed that at this session we might outline some work that would be practicable.

In the meanwhile the Committee would suggest and advise: 1. That each County Medical Society, annually appoint or elect a committee to co-operate with the State Child-Welfare Bureau; 2. That each County Society shall plan for a week out of the year to be known as Child Welfare Week, and that during this time the community be instructed by talks or demonstrations along pediatric lines; 3. That where it is feasible milk stations be established, at which clean milk at cost, and free pediatric and prenatal instruction be offered; 4. That each County Society use its influence to have medical school inspection put into practice; 5. And that in each and every community of the State, or at least in each county that there should be some careful and scientific inspection of dairies, and a chemical and bacteriological examination of all milk offered for sale; 6. And lastly that this Association publicly go on record as favoring protective child labor laws.

April 15, 1919.

(Minutes to be Continued)

ABSTRACTS

RURAL HOSPITAL SERVICE.

In the second part of the preliminary report prepared by Ernest C. Meyer, director of the Department of Surveys and Exhibits of the Rockefeller Foundation International Health Board, published in The Journal A. M. A., May 3, 1919, the subject of the present care of sickness in the United States and Europe is taken up. Comparing the numbers of physicians, a table shows that in 1910, we had three times as many physicians in proportion to the population as the most favored nations of Europe. This may have been more essential years ago, when the population was scattered, but is less

necessary at the present time when it is becoming much denser. The output of physicians from the medical schools was readily increased after 1850, so that between 1900 and 1906 it exceeded 5,000 annually. Since 1906, with increased standards of preliminary education and some merging of medical schools, a rapid diminution of medical schools and graduates has occurred. In 1918, the number graduating was 2,807, a decrease in quantity with an improvement in quality. A competent physician can, it is evident, care for a larger number of patients than one not so well trained. In 1918, there was one physician, still, to every

712 people, or more than twice the number reported in the best supplied countries in Europe. Contrary to the common belief, it seems that in proportion to the population, the number of physicians has scarcely increased at all. While in 1850 there was 569 people to one physician, in 1910, there were 582. While difficult to measure, it is clear that there has been an increase in the need and demand for medical aid during this period. The demands enumerated are as follows: "1. Better care of chronic diseases, such as tuberculosis. 2. Increased care in childbirth. 3. Increased demand for purposes of laboratory diagnosis. 4. Increased work for public health inspection and control, as for instance, medical school inspection and quarantine work. 5. Increase in teaching work and medical investigation. 6. Increase in routine laboratory work. 7. Large development of medical journalism. 8. Increased demand for insurance work. 9. Greater interest in health on the part of the public." Undoubtedly the rate of increase in the supply of medical men has failed to meet the increase in the demand. The medical service, however, has not been satisfactory in the past, the quality not measuring up to the quantity, but the improvement is encouraging. The medical service in the country is undoubtedly less than in the cities. In fact, there are only about half as many physicians in rural districts as in towns. In towns of more than 2,500 population the average is 513 persons to one doctor, while in the rural districts it is 991, but the tabulated figures tend to overemphasize the situation, as many physicians in towns have also rural practice. However, the statistics fail to express adequately the difference, as the facilities for transportation are greatly in favor of

the non-rural doctor. With the advent of the automobile and of paved roads country practice has improved, and many country patients go to or call the city physicians. The rural South has the poorest medical service; the Mountain and Pacific States next, with the middle Atlantic States fourth. It is of interest, also, that in the southern cities opportunities for medical service are greater than in those of the North. The country regions are also handicapped by the greater age of the physicians, as well as their probably less up-to-date efficiency. What the rural regions seem to need is a wiser and more extensive use of the medical facilities available. The hospital facilities have been little studied, and the best information covering the country is shown by a table taken from the census report of 1910. It was impossible to secure sufficient information for comparison of urban and rural regions. About one in every three sick persons was found to be bedfast, and the data in this regard are largely taken from insurance statistics. The adequacy of medical care was also sought to be ascertained, and a large percentage was found inadequate. The inadequacy of hospital care was due chiefly to lack of social service and follow-up work. In the statistics of 1,600 sick, needing hospital care, only about one-third received it. A number of tables accompany the article.

BILIARY CALCULI.

A. M. Willis, Richmond, Va. (Journal A. M. A., May 10, 1919), calls attention to the pseudorecurrences after operation for biliary calculi due to the persistent presence of stone in the common duct. In a total number of 620 operations in his practice with his late colleague, Dr. G. B. Johnston, 512 showed the presence of calculi some-

where, while in 108 cases of cholecystitis there were no calculi. Stones were found in the common or hepatic ducts in about fifty cases. In fourteen of the common duct cases the patient had been previously operated on. In four the stones had been discovered but not removed because the condition of the patient contraindicated cholecystotomy at the time. In five of the ten remaining cases, the stone had not been even suspected either from history or from palpation of the duct. No matter how skillful a surgeon may be some stones in the common duct will not be palpated, especially those in the last or preduodenal portion of the duct, the place where, according to Robson, they are most likely to lodge. While we may say that some of these instances are recurrences, the probability is that they have been overlooked. "Unquestionably, exploration of the duct will serve to reveal some stones that otherwise would have been overlooked. When, however, is this procedure to be employed? If the classical symptoms of common duct stones are present, such as chills, fever and icterus, or if the duct is enlarged and thick-walled, or if many small calculi are present in the gallbladder or cystic duct, or if there is an atrophied gallbladder, exploration of the common duct is unquestionably a justifiable course; but in my experience, in cases such as these, palpation usually suffices to demonstrate the presence of the common duct calculus. I believe that the majority of surgeons will agree in the opinion that routine opening of the common in all patients with gallstones is not justifiable; yet I am convinced that unless this is done, a certain number of common duct stones will be overlooked and remain to cause subsequent symptoms. All of us can recall cases in which none of

the classical symptoms of common duct stone were present, and yet operation revealed the presence of one or many calculi in that location." Willis admits that he himself has failed to detect common duct stones even after opening the duct. A certain number of patients with stone in this situation fail to show symptoms justifying exploration of the duct, and in some palpation will also fail. Operative risk is more than fourfold as great when the common duct is included, and he reports five fatal cases, in all of which hemorrhage was a striking feature, as well as a contributory cause of death. While it is universally recognized that delay and expectant treatment are indicated in some types of abdominal infection, he is more and more inclined to doubt it when there is obstruction of the common duct. In such cases the appearance of jaundice is an important factor in influencing his decision for immediate operation.

PAINLESS INCISION.

A. L. Soresi, Milan, Italy (Journal A. M. A., May 3, 1919, says that incision may be made painless by first dipping the scalpel into pure carbolic acid a few seconds before use. This will be the case even in incising deep tissues. It is the least dangerous method of anesthesia, either local or general. Naturally it is the cheapest method, and in a certain class of cases it promotes the complete cure of the pathologic condition. This statement requires some explanation. On account of the slight cauterization produced, wounds do not close as rapidly as when made with a bare instrument, but this is an advantage in incising tissues the cut edges of which do not need to adhere immediately, as in opening pus-collections or infected tis-

sues, but it should not be used when union by first intention and suture are needed. The scare produced by this method are not ugly; in fact, much less so than those resulting when drainage is required.

HAIRPINS AS L. RETRACTORS.

A. L. Soresi, Milan, Italy (Journal A. M. A., May 10, 1919), suggests that in minor surgical operations, when special retractors are not at hand, hairpins may be used. He points out how they can be applied and says the great advantage they have for this purpose is, that they can be bent so as to follow the curve of the part on which they are to be placed, without changing the natural position of the tissues to be retracted.

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SETTLEMENTS MADE MONTHLY

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(3071)

L. STREPTOCOCCUS MENINGITIS.

G. H. Weaver, Chicago, (Journal A. M. A., May 10, 1919), reports a case of meningitis due to a gram-positive streptococcus, recognized as *S. viri-*

dans. It was unusual on account of the patient's recovery under treatment with antistreptococcus serum, by spinal injection. The improvement that followed each administration was striking.

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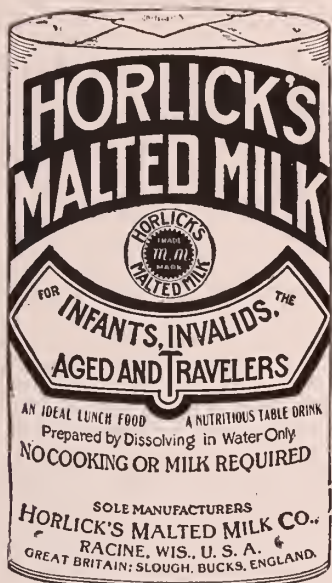
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EDITORIAL

INFORMATION WANTED FOR RE- VISION OF MAILING LIST OF JOURNAL.

During war times the mailing list of the Journal became more or less inefficient owing to the frequent changes of address of the large number of our membership. Many members will be changing locations and many will be returning from overseas or from other service for the government.

We earnestly desire information on all these points so that every member of the State Association shall receive the Journal promptly. We urge therefore the county society officers and others who may know of members entitled and not receiving a Journal to drop us a card.

MEETING OF THE THIRD DIS- TRICT MEDICAL SOCIETY, GREENWOOD, JULY 29TH, 8 P. M.

We have been requested by the Councilor of the Third District, Dr. T. L. W. Bailey, of Clinton, to announce the meeting at Greenwood, Tuesday, July 29th at 8 p. m.

The Councilors of the various districts are very active in reorganizing their district societies and the Third District will undoubtedly have a great meeting at Greenwood.

President E. W. Pressley of Greenwood, will be present and will deliver an address.

THE FOURTH DISTRICT SOCIETY TO REORGANIZE.

We are in receipt of a letter from Dr. L. O. Mauldin of Greenville, Councilor of the Fourth District, saying that a conference of the officers has recently been held and that a reorganization

meeting will be called shortly.

The Fourth District was the pioneer district society in the State and for many years rivalled the State Association in many respects in point of interest and attendance.

The program will be out shortly giving the time and place of the meeting.

ORIGINAL ARTICLES

THE DEVELOPMENT OF A BUREAU OF CHILD HYGIENE OF THE STATE BOARD OF HEALTH OF SOUTH CAROLINA.

By Mrs. Ruth A. Dodd, R.N., Director,
Columbia, S. C.

WHEN beginning public health work some years ago in Virginia, I told Dr. Flannagan of the Virginia Board of Health, that if there was any speech making to be done, he would certainly have to send someone else to do it; because I wanted him to distinctly understand that I had absolutely no suffragistic or new-woman tendencies, and that, moreover, I had been reared in the Presbyterian Church, where the women kept silence, all.

I told the teachers that nurses were not speechmakers; that the whole of a nurse's training tends to the repression of speech; that we are taught to do, but to use very few words in the doing;; that, of course, years ago when I was a school teacher I had no hesitancy in addressing almost any audience on almost any subject, but that had been so many years ago that I had quite forgotten how I ever did it.

Read before the South Carolina Medical Association, Florence, S. C., April 16, 1919.

But the following summer I went to New York to attend the National Educational Association. At one of the sessions of the Congress of Hygiene Miss Crandall read a paper in which she emphasized the great need of county public health nurses. After she had finished up popped Dr. Flannagan and stated that we had one such nurse down in Virginia actually doing the work, and that that nurse was then present if they cared to hear from her. Of course they called for that nurse. I was seated in the rear of that assembly room, and looked up perfectly aghast. But Flannagan's eyes were on me; and Flannagan's eyes said, "Come." I arose and walked up that aisle thinking, "What shall I say? What shall I say? What shall I say?" But Flannagan's eyes were on me; and Flannagan's eyes said, "Talk." I opened my mouth and talked like a phonograph until Flannagan's eyes said "Stop." What I said on that occasion I shall never tell, for verily with him Svengale-izing me like that, I was only Flannagan's Trilby.

Now, Dr. Hines did not know that, in order to make me talk, I must be hypnotized. So it may be that he is facing an embarrassing situation for himself as well as for me.

It was during the summer of last year, having been sent by the Federal

Children's Bureau to Darlington County to assist in a health campaign for children of pre-school age, that my interest was first directed to health conditions of South Carolina. There, in six weeks' time, more than sixteen hundred children were given a thorough examination. Of these more than twelve hundred were found to have some physical defect. The consolidated school system prevails in this county and a meeting was held in each school district. Practically every home in the county had been visited, the object of the meetings explained, and on the day of the conference almost every family would be represented at an all-day meeting, with a big spread provided by the mothers in defiance of Mr. Hoover. In some of the districts one hundred per cent. of the children of pre-school age were brought for examination. In my year's work with the Children's Bureau, in a series of these surveys held in various states all the way from Wyoming to Southern Mississippi, I had not seen so overwhelming a response. Local physicians cooperated; mothers consulted family physicians, many times on their way home from the conference; in a short while calls were coming in from all over the county for corrective work. It was here, after an interview with Dr. Hayne, in which he outlined his plans for a bureau of child hygiene, that my interest crystallized into an agreement to become State Supervisor of Public Health Nursing.

It was understood that I should assist in development of plans for the new bureau; in the legislation necessary for its establishment; and, in the event of our obtaining adequate appropriations, that I should become the Director.

The months of January and February were strenuous and nerve-racking months, during which time we were

mostly on the anxious seat, pending the action of legislature. Finally, however, the satisfaction was ours of seeing the bill safe through the Ways and Means, of the House, the finance committee, the Senate, with an appropriation of \$10,000.00. The bulk of this sum will be consumed in the establishment of the bureau, leaving little for broadening the work.

A bureau of child hygiene, as I understand it, should plan to include within its scope of activities:

First.—Investigation of health conditions by means of surveys.

Second.—Education and stimulation of the people by means of lectures, exhibits, and literature.

Third.—Demonstration work in counties, leading up to organization for establishment of health centers and location of public health nurses.

Fourth.—The carrying out of a definite child hygiene program in those counties employing nurses.

Fifth.—The stimulation of public health interest among nurses, and the standardization of their work.

The definite program which has been arranged for those counties employing nurses will include:

First.—Improvement of birth registration.

Second.—Control of midwives, which will mean, first registration; then education and supervision; and, lastly, licensing.

Third.—Pre-natal care of children.

Fourth.—Use of drops in new-born babies' eyes.

Fifth.—Establishment of health centers where mothers may go for advice concerning themselves and their children.

Sixth.—Supervision of bottle-fed babies.

Seventh.—Medical inspection of school children.

Eighth.—Establishment of clinics for correction of physical defects.

Ninth.—Control of tuberculosis and other communicable diseases.

The staff of the bureau will consist of a director, a secretary, and a field nurse.

The director, in addition to directing the work, will stand ready to give talks to women's organizations, home demonstration clubs, nurses' organizations, health meetings, hospital training classes, etc. She will strive to stimulate public health interest among nurses, and in every way to raise the standard of their work.

The secretary, in addition to keeping office records, will assist in writing educational matter. We have the beginning of a very good library for nurses, which she will keep in circulation.

The field nurse will conduct surveys, promote birth registration, give health talks, organize counties.

In cooperation with the Secretary of the State Tuberculosis Sanatorium and the Secretary of the State Tuberculosis Association two more nurses will be available. These nurses will be located in counties for periods of three or six months for demonstration work, which we hope will lead to location of permanent nurses.

In cooperation with Chester and Greenville counties, two permanent nurses will be added to the staff. These nurses will begin work the first of June, giving the Bureau of Child Hygiene at that time a complete working force of seven nurses.

It is the plan in Chester and Greenville counties to establish health centers in the rest rooms now being maintained by the Chambers of Commerce. Here mothers will be encouraged to come for advice; classes will be instructed. Later clinical equipment will be installed; a dental chair; equip-

ment for nose and throat work.

The work of the county nurse must of necessity be both varied and complex. She can not limit herself to any one specialty; for hers is a public health service that deals with any preventive measures and health problems in all parts of the county. During the summer months she will concentrate her energies upon improvement of birth registration; registration of midwives; supervision of bottle-fed babies; improvement of sanitary conditions in homes; supervision of tuberculous patients; she will instruct classes of mothers; classes of midwives; and assist in combatting any communicable disease that may arise. As soon as school opens in the fall she will begin medical inspection, and the teaching of health principles in schools.

And here, let us not confuse the idea of a medical **inspection** with that of an **examination**... Let us not, for a moment, conceive the idea that the nurse infringes, in the least, on the domain of the physician, or ever usurps his prerogative in diagnosis of disease. The nurse simply **inspects** the children and **suspects trouble**. She then advises the parents to take them to the family physician for examination and diagnosis.

The inspection consists of a simple testing of the hearing; a testing of the sight by means of a Snellin's chart; the examination of the throat for enlarged tonsils; of the nose for a nasal obstruction; of the teeth for cavities; a record of weight, height, skin, color, and whether nutrition be good or poor. Any nurse with ordinary intelligence can make these simple tests. Yet all of these are indices pointing to either health or disease.

It will be a long and weary road before the nurse can hope to compass all of these varied activities; and in the beginning she must, of necessity, touch

the work only in high spots. But we, who are viewing the perspective, must have broad enough vision to plan to include, eventually, all of these different branches within her scope of activities; keep in mind the fact that the keynote of the nurse's work is **preventive** rather than **curative**. I believe if the nurse goes into the school and teaches those children just entering school in the first grades to brush their teeth twice a day, more has been gained than if provision were made to fill every hollow tooth in the county. When those children reach the high school grades there will be very few hollow teeth to be filled. It is a spectacular thing to appropriate money to send tuberculous patients to sanatoria for treatment; but is it not a **better** thing to send the nurse into the school to teach the children to sit correctly, stand correctly, breathe correctly; then to go into the home and teach the mother to sleep with open windows and give the children plenty of fresh air and good wholesome food? Then, in a few years from now, there will be fewer tuberculous patients to be sent to sanatoria.

It is recognized on every hand that the war has brought about a far-reaching change in the ideals of the nursing profession. The work which the nurse has done with the armies, abroad in devastated countries, and in the cantonment zones of our own country, has made it impossible for her ever again to limit herself to a single private patient, except in case of very grave disease. She has recognized her responsibility, and the responsibility of her profession, to the community, and to the welfare of the whole nation. From now on the nurse will be looked to to maintain health, and to make the cure of sickness incidental to that. And she will be asked to make health not the privilege of the few, but the birth-

right of the many. Only the nurse can make this universal application of the principles of health and the cure of disease, for it is the nurse who reaches down into the family and touches the life of the individual.

This public health nursing profession can not be one of slow development, but must be one of rapid growth; for the demand now far exceeds the supply. And the public health program which the Government is proposing as the basis for all reconstructive work will make this demand limitless. Surgeon-General Rupert Blue says there should be a public health nurse in every county.

The greatest handicap of all these health programs is the lack of properly trained material. You can readily see that the public health nurse must be a woman of broad training. She must know many things that the hospital nurse does not know. She must have courage, independence, and social understanding. She must use ingenuity in meeting practical conditions.

Conditions brought about by the war and the influenza epidemic have aroused local people, as never before, to a realization of their need for public health nurses. Calls are coming in from all over the State for county nurses, small town nurses, mill community nurses, school nurses. We have not at hand the material with which to meet the demand.

Anticipating this condition, in February two scholarships were obtained to send nurses to the Richmond Public Health School for a four months' training. These nurses will be available the first of June. Many more are needed.

And so, you see, our Bureau of Child Hygiene is in its struggling infancy, with little of history—nothing of accomplishment; with a mass of dreams and visions and ideals, not yet taken

shape; and, confronting it, a multitude of unsolved problems. Let us hope, in a year from now, some of the answers may be proven.

LETHARGIC ENCEPHALITIS.

By J. G. Eaddy, M.D., Johnsonville, S. C.

ORIGINALLY it was my purpose in coming before this august body with a paper on Encephalitis Lethargica to delve lengthily, learnedly and profoundly in to the subject. But in view of the fact that recent writers in our Medical Journals and other periodicals have so fully anticipated me in this respect, and you are already familiar with the subject, and furthermore and most important, in view of the general lethargy of the whole subject, I fear such effort on my part might not convey to you the causative factor of this peculiar disease, and ere I had half finished, I would find at least half my audience affected with this sleeping sickness, and myself reading the end of my paper to the melodious accompaniment of a Medical Snoring Band! So I shall present only this short paper.

At different times during the last 30 years there has appeared outbreaks of a peculiar disease probably best described by Sainton as "a toxie infectious epidemic syndrome characterized clinically by the triad lethargy, ocular palsies, and a febrile state; and anatomically by more or less diffuse encephalitis, most marked in the mid brain."

Reference to the literature shows an outbreak of this disease in Italy and Hungary in 1890 which was called "Nona," and at least two other epidemic outbreaks have occurred, ap-

pearing in the United States in 1895. It seems to have been short lived and practically forgotten, to reappear in Europe in 1917, and called Lethargic Encephalitis in Austria. From Eastern Europe it seems to have spread westward and reports come to us of the disease appearing in England in February, 1918.

Similar epidemic outbreaks are reported at various times following grippe epidemics as early as 1718. Some writers stress the fact that these outbreaks have always followed grippe or influenza, though it is rarely found that the encephalitis patient has previously suffered an attack of well defined flu, and some seem to think there is no relation between flu and this disease.

The theory is again advanced that the virus of this particular disease is one which, like the poor, is always with us, and merely takes advantage of the generally weakened vitality and exhausted condition after mild attacks of flu to express itself on the individual.

I shall make no attempt to go fully into the pathology, symptomology, laboratory findings, diagnosis, prognosis, et., as rather exhaustive articles have recently appeared in the American Medical Journal giving such data in detail. Suffice it to say here that the most frequent characteristics are lethargy, or stupor, and symptoms referable to the third pair of cranial nerves. Usually there is slight fever lasting for only a few days. These symptoms frequently follow a prodromal stage in which the patient has suffered from a simple catarrhal conjunctivitis, or probably a sore throat, or bronchial catarrh, and the onset is usually gradual. While most patients with this disease show marked symptoms of stupor, others, on the other hand, are extremely nervous and restless with marked muscular tremors.

In fact the same patient will sometimes present symptoms of extreme lethargy with profound sleep and rigid muscles, and next day be very wakeful with a constant jerking movement of the muscles, particularly noticeable in the lower limbs.

From what data I have been able to find on this disease, a case occurring recently in my practice seems to me to present a most characteristic picture; which case I shall now present.

On March 12th, 1919, I was called to see Mr. J. D. C. a man something over 50 years of age with rather a negative history. He is a man of large family, twice married with a number of children, all healthy. This family suffered an outbreak of the flu in January of this year. The patient himself, escaping. A week or ten days before I was called to see him, he suffered a mild attack of coryza. On Sunday before I saw him on Wednesday, he was at church, and was much annoyed with diplopia suddenly appearing, which continued with headache and vertigo and was markedly present when I saw him first on Wednesday the 12th. He appeared mentally confused, slight fever, and in addition to diplopia headache and vertigo presented marked ptosis on both sides.

He complained of gas formation on his stomach which had been a distressing symptom for several days. Dysphagia and some difficulty in voiding. Two days later the picture was very much the same; tem. 102 distinctly dicrotic pulse, delirium, restless, was tremor of limbs, knee jerk absent except for very slight response on right side, pupils equal reacted to light very poorly if at all. On the 19th temperature was 99.2-3, retention of urine, extreme constipation which latter condition had existed from the first day. The next day his temperature was normal and there seemed a marked im-

provement except for the paresis of the bladder; with at times much clearer mental condition, diplopia disappearing.

On the 20th, after a night of profound sleep, he awoke very nervous and restless, chloral being necessary to control his extreme nervousness. Marked mental confusion, kidneys acting freely but catheterization still necessary. This was followed the next day by involuntary stools and constant delirium. If spoken to he would notice you and commence an intelligent reply to questions, but later a few well connected words would lapse into meaningless expressions. He went to sleep in the afternoon, sleeping very soundly until next day except when aroused.

After one day of involuntary stools he became very constipated again, bowels being moved only by enemas from then on. His condition remained very much the same for several days with normal temperature, pulse and respiration. He would never speak to any one or call for anything, but would always take readily any medicine or nourishment offered.

I should have said that from the beginning there was marked rigidity of the abdominal muscles.

From March 25th on there was gradual improvement of all symptoms with vision poor for near objects with occasional diplopia with bladder functioning normally, but no improvement in constipation.

At the present time patient is able to be up and around the house. While he complains of some mental confusion, worse at times, he is showing some interest in his farm work and is gaining strength. There is still marked ptosis on one side.

The urinary findings at all times were normal, and systolic pressure was 130. No spinal puncture was done, nor was a Wasserman made.

Treatment was entirely symptomatic and confined largely to efforts to keep patient comfortable, warm applications to his limbs seeming to add to his comfort.

There seems to be no specific treatment but I believe that withdrawal of cerebro spinal fluid would be indicated certainly where pressure symptoms present. Opiates particularly are condemned. At present I have him on strychn. and have advised following later with electricity to improve his general muscular tone.

I note that in the public health bulletins convalescence, in those recovering, may be expected to be prolonged for six months.

QUALIFICATIONS OF A SUCCESSFUL HEALTH OFFICER AND THE ESSENTIALS OF GOOD SERVICE.

By **M. M. McCord, Commissioner of Health, Rome, Ga.**

FOR a health officer to have any degree of success in his labors, there are certain qualifications which are largely essential to success.

Must Believe in His Work.

No man need expect to make a success of public health administration who has no faith in his work. He must have come to the conclusion that such a work, properly conducted, will bring the richest returns, or else his efforts will all be in vain. As an illustration, imagine a health officer or even a member of a board of health, who does not believe that typhoid inoculations are a prevention to typhoid fever. That idea would been alright for the dark ages in medical research, but today with the light of the present genera-

tion, the results which have followed the use of inoculations in our great American armies, to say nothing of what they have meant to the civilian population in smothering out this filth born disease, there is left only one of two propositions: he is either maliciously ignorant on the subject of inoculations, or else he is grossly ignorant of the malignancy of the average case of typhoid fever.

Must Love His Work.

There is no picture in life any more pathetic than seeing a person trying to serve a master he does not love. A health officer must not only have faith in public health administration, but he must love it. So long as everything runs smoothly and we are going down grade, it matters not so very much whether we love the work or not for it will run itself, but when the health officer meets obstacles and unsolved problems, he soon loses all patience and respect for the work if he does not love it. Our love for our families makes us enjoy working for them, therefore our love for the wonderful results to mankind, which will follow a constructive public health administration, will cause us to lose sight of the arduous task which confronts us.

He Must Have "Push."

The office of health officer is no place for a lazy person. He must be constantly on the job, wide awake and progressive. Lazy health officers who have had any unusual success in their work, all died before the dawn of the 20th century. Any man who thinks that being a health officer is a "soft snap," which can be filled by any man who has energy enough to draw his salary, is vitally wrong. Such health officers as that, fail to get results, also they fail to hold their jobs.

Must be a Man of Pleasing Personality

It is necessary for a health officer to come in intimate contact with all social, civic, political and religious organizations in his community in the interest of co-operation in his propaganda, therefore he should be such a type of person as can gain the influence and esteem of the best citizens. A health officer who has no attractive personality, to appear before any organization, will not only fail to get results, but rather in return will put the people further from his proposition.

Must be Tactful.

If I were called upon to give the most important of all attributes for a health officer, it would be simply "tact." More men and women have utterly failed in their plans and undertakings in the walks of life for lack of "tact," than any other one thing. The time when people can run any kind of business or make any kind of success and leave out tact, has passed. This blunt, frigid style of meeting and dealing with people does not "deliver the goods." Education does not take the place of tact. The proper kind of an education makes a person more tactful. Riches do not take the place of tact. A person who is really wealthy, and has no cerebral defect, is usually more tactful than the person who is struggling for existence. Every person who has any dealings with the public, either in private or public affairs, should learn that tact is the greatest asset any person can have. Throw away tact and you throw away your fortune.

Must Be Broad Gauged

The person of narrow vision never accomplishes big things. He has a small view of everything, therefore the events following his efforts are of the small type. This is a day of big events

and broad-minded men and women, therefore, the narrow-gauged person with his contracted vision of the possibilities in life, withers as a leaf and is forgotten. Public health administration is a broad-gauged work which will utterly fail when trusted to narrow-minded people.

Must Not Work Too Cheap.

A laborer is worthy of his "hire." This is very true in public health as in all other activities. A physician who is competent to make a successful health officer is able to make a success in any other line in the profession, therefore, as he is giving his time, talents and the best that he has, to the people in perfecting plans and putting them into operation for the protection of health and conservation of human life, he should be paid in common with what the best physicians of his community are making. A worn out physician, who has proven a failure in his private practice, will prove a failure in his public health administration. Surely a man who can handle problems successfully in health matters in the interest of all the people, can make even a greater success in handling only his special problems in private practice.

Must Have Well-Equipped Office.

There is no work in any city, town or county of any greater importance than protecting the health of the people. The practice in some places, of giving the large, clean, well-ventilated offices to the other official departments of the city or county, and put the health officer, who is to stand guard over the community's health, off in some dusty, dark, unclean, unnoticed corner, is a reproach to our civilization, and if the board of health will not stand up for its rights, the health officer should demand the right kind

of quarters which can be made attractive and clean, or refuse to serve.

Must Attend All Public Health Meetings.

Any board of health which has not faith enough in the work it proposes to do, to send its health officer to all public health meetings, should resign and let some real wide awake men get in who can and will do something. It is just as necessary for public health men to come in contact frequently with the best men and ideas along that line, as it is for medical men, teachers, business men or any other kind of men to have their associations. Every time a health officer attends a public health meeting, he brings something back to his people worth far more than the little expense connected with his trip.

Must Read Public Health Literature

A health officer who goes into office, assuming there is nothing new to learn, or that he knows it all, will make a miserable failure. He must constantly feed his mind with new thoughts, or else he withers away.

Must Keep Public Health Before People

For a health officer to be a continued success, he must keep his work constantly before the people, for two reasons: To better inform them on the value of public health administration and what part each person should take in the matter, also as a means of letting the public know whether or not he is accomplishing anything. He should use his tact in securing the co-operation of his local papers, and carry a column, at least once a week, on some health matter. He should also take advantage of every opportunity in public or private, to get his work before the people.

Must Keep a Diary.

Every health officer should keep books on his work. Every effort of the health officer, whether great or small, if it is worth doing at all, is worth putting on record. A diary should be kept and everything in detail from day to day recorded, then at the end of the month it will be a very easy matter to show what has been done, otherwise a health officer might work unceasingly for a month and not remember enough to make a recent report.

Must Have Ability.

If all the other essentials are present with the health officer, one can, in the majority of instances, consider that he has ability. It does not make much difference whether a health officer is a bacteriologist or not. The thing you want in a health officer is not ability to hunt bugs under the microscope. You can get a competent girl bacteriologist from fifty to one hundred dollars per month, who will be more accurate in microscopy than the average man bacteriologist. What you want in a health officer is not a fellow to find bugs, but rather a fellow who can handle sanitary problems skilfully and get other folks to killing and preventing bugs.

There are hundreds of young physicians who can conduct a laboratory with much skill, yet these same men would make a miserable failure in going up against people in teaching them sanitation and getting them to do their part to keep folks from getting sick and dying unnecessarily.

In searching for a health officer, who can get results, don't run him through the laboratory the first place. Take him down the street and see how he rubs up against the people.

Unfortunately, the average health officer does not have much time to stay in his office and hunt bugs, unless he

has more help on the outside of his office than most of them have.

The prime reason that we do not have the very best medical men in all cases, to act as health officers, is for the reason that a real competent health officer is not paid enough and therefore he soon sees it his duty to his family to leave the work. A medical man who cannot make more in private practice than he can in public health administration is usually not much of a health officer. In my judgment, the reason public health has moved so slowly in many places is because the health boards have tried to fill the place with

cheap men, either for political reasons or because they did not want to pay much. If the protection of public health is worth anything in conserving life and human efficiency, it is worth enough to secure the men most eminently fitted from every standpoint, and then pay them salaries in common with the income of the best physicians.

The sooner the public learns the value of a real health officer of the community, the sooner will public health administration occupy the prominent place it should as an asset in conserving the health and lives of the people.

MINUTES

MINUTES HOUSE OF DELEGATES 1919
MEETING CONTINUED—REPORT
OF STATE BOARD MEDICAL
EXAMINERS.

The report was read by Dr. Boozer, and was as follows:

Report of State Board of Medical Examiners, by A. Earle Boozer, M. D.

The term of office of Drs. Harry H. Wyman, H. L. Shaw, A. M. Brailsford and A. Earle Boozer expired with the April, 1918, meeting of the South Carolina Medical Association. The House of Delegates proceeded with the nomination of members to fill these vacancies on the Board, with the result that each member was re-elected to succeed himself. All nominations were then confirmed by the Association and the members appointed and commissioned by the Governor to serve their respective term of office.

The Board met at the State House at 3 p. m., June 10, 1918, and registered applicants to practice medicine and for nurses' registration.

At 9 p. m. the Board met at the Hotel Jerome with the following members present: Drs. Harry H. Wyman, J. J. Watson, John Lyon, H. L. Shaw, E. W. Pressley, J. T. Taylor and A. Earle Boozer. The annual election of officers was held, and the following were elected: President, Dr. Harry H. Wyman, Secretary-Treasurer, Dr. A. Earle Boozer.

The examination questions proposed by the members were considered and approved, and the following order of examination was adopted: Tuesday, 9-11, Dr. Pressley; 3-6, Dr. Shaw, 8-11, Dr. Watson.

Wednesday, 9-12, Dr. Lyon; 3-6, Dr. Taylor; 8-11, Dr. Wyman. Thursday, 9-12, Dr. Brailsford; 12-3, Dr. Boozer.

In accordance with a resolution adopted by the House of Delegates at the meeting in April, 1916, the nurses were given practical examinations as follows: Practical and Surgical Nursing. Drs. Wyman and Boozer, at State Hospital for Insane.

There was no examination held in November as it was impossible to secure a quorum owing to the fact that three members of the board were in war service, viz: Lieut. Col. Pressly, at Base Hospital, Camp Sevier; Maj. Brailsford, with the army in France, and Capt. Shaw, at Base Hospital, Camp Jackson, while the other members were detained at their homes with war work and conditions resulting from the influenza epidemic.

Applicants for Examinations.

Doctors, June	30
Nurses, June	50
Total	80
Doctors	
White, males	28
Colored, Males	1
White, Females	0
Colored, Females	1
Total	30
Nurses	
White	47
Colored	3
Total	50
Grand total	80

The Board met at Columbia, S. C., in July, 1918, to tabulate the grades made by the applicants at the June examinations with the following results:

Doctors

White, passed, 17; colored, passed, 0. total, 17.

White, failed, 11; colored, failed, 2; total, 13.

Total, 30.

Nurses

White, passed, 34; colored, passed, 0; total, 34.

White, failed, 13; colored, failed, 3; total, 16. Total 50.

Grand total, 80.

The Secretary: Let me read, now, a letter that should be read at this moment, because it is in connection with this report.

The Secretary then read a letter from Dr. John Lyon, of Greenwood, saying that he did not wish to be re-elected to the State Board of Medical Examiners.

The Secretary: I thought that the House of Delegates should be in possession of this information before the time of the election comes.

DR. HAYNE: The next is the Report of the Committee on Medical Education, of which the chairman is Rr. J. Heyward Gibbes, of Columbia, the other members of the Committee being Drs. J. H. Seisler, Newberry; Robert Wilson, Jr., Charleston; W. W. Fennell, Rock Hill; Jess Bell, Due West; A. M. Redfern, Clemson College; L. O. Mauldin, Greenville. D. B. Lyles, Spartanburg; J. B. Townsend, Anderson, and T. L. W. Bailey, Clinton. Is there any report from this Committee? Hearing no answer, we will pass on to the Report of the Committee on Prevention of Venereal Diseases Dr. E. C. Baynard, of Charleston, is the Chairman of this Committee; and the other members are Drs. N. B. Edgerton, of Columbia, and C. A. Mobley, of Rock Hill. Dr. Baynard?

DR. E. C. BAYNARD, Charleston. Chairman of the Committee on Prevention of Venereal Diseases: Mr. President, I should like to beg pardon for not presenting the report this morning, but the Committee has not had an opportunity to meet. I should, however, especially from the United States Public Health Service, to bring to your attention the fact that several clinics have been instituted in the State for the free examination of all venereal patients, and, further than that, for the treatment of such patients. Free salvarsan has been administered and other forms of treatment given. There have been six of these clinics established, and the attendance has been good. Within the last year, the State passed a law requiring the reporting of venereal diseases. The cases were supposed to be reported by number, in order that the individual patients need not feel that anyone would know who he

was. This is important, and I cannot yet say how well it is being carried out. The work is under the charge of the Public Health Service, the members of which are working with the State Board of Health at Columbia in connection with this matter.

DR. HAYNE: In amplification of this report, I should like to say that the State General Assembly gave ten thousand dollars for the control of venereal diseases in this State, and that this amount is supplemented by ten thousand dollars from the funds of the Federal Government. As a matter of fact, we have more than that; for the County of Spartanburg has given six thousand dollars, and the County of Greenville has given three thousand. This makes nineteen thousand dollars in the State, which is supplemented by five hundred dollars (\$1,000,) from the Federal Government. Clinics have been established at Greenville, Spartanburg, Columbia, and Florence; and others will be established in the State. The purpose was at first connected with the law and order enforcement in the extra-cantonment zones; but now it will be simply the establishment of clinics where those suffering from these diseases who cannot pay for treatment can be treated and cured free of charge. The attendance at some of these is very large. In Columbia, it averages, I believe, sixty a day. As the physicians become better acquainted with the facilities that are afforded by these clinics and the fact that they can have their indigent patients cured of syphilis and other diseases of that character, they will cause these clinics to be over-run. The fact that from the first of January until the first of April there have been 2,500 Wasserman tests made in the State Laboratory at Columbia, will give you an idea of the amount of interest that has been displayed in that disease.

This Chamberlain Fund is a continuing fund given by the Government, and is in proportion to the population; South Carolina having six thousand five hundred. We expect to make this work permanent, as a work of the State Board of Health, in the prevention of communicable disease, and not from the moral standpoint, which we believe not to be the function of the medical profession, but of others engaged in the moral uplift of the people. Consequently, we are approaching it simply from the standpoint of preventing the spread of a communicable disease.

The next item on the program is the Report of the Committee on Standardization of Hospitals. Dr. Robert Wilson, Jr., of Charleston, the Chairman of the Committee, E. W. Carpenter, of Greenville; E. Hines, of Seneca; J. R. Young, of Anderson, and F. H. McLeod, of Florence. Dr. Carpenter, have you a report for the Committee?

DR. E. W. CARPENTER, Greenville: This is the first official notice that I have had of being on the Committee. I am sorry not to have had an opportunity to meet with the other members. Understand, though, that this whole matter of hospital standardization has been held up generally in the United States. They are still holding off from deciding on a definite program in all the States. That, of course, is simply my personal impression on the subject. I hope that next year the Committee may be able to give some indication of activity.

The Secretary: These committees are virtually standing committees, and have been so for years. There were two or three changes made, of necessity, at the last moment, a few names being added. The other members of the committees were retained. The Chairmen had all been notified of these changes long ago, and practically all were doing work. Dr. Wilson has written to me stating that he may be able to be here later in the session. He has been working on the subject, and may present a report. Some of the other appointments, however, could not be made until very recently; while the official programs were sent out quite early this year. Therefore, the Secretary had to let some of the members of the committees obtain the information that they were on these committees through their respective Chairmen, which is customary, and from the program.

DR. HAYNE: This completes the official program. Now we have the Introduction of New Business. If there is any New Business to be introduced, this is the time for it to be done. If there is no New Business, we will pass on to Miscellaneous Business.

DR. WALTER CHEYNE, Sumter: There is a matter that I should like to bring before the House of Delegates, and that is in reference to the license, the repeated license, of the narcotic law. Yesterday I had a visit from a collector, who requested the payment of a small sum for a license. He collected a dollar and a half for this license for the balance of the year. It has already been paid for to the first of July, and for this we have a receipt. As I understand it, this expense is willingly borne by the doctors, because of the cost incurred in the registration of physicians; but I personally feel that the excuse that has been offered, that the Government needs the money, is not a fair one. I do not believe that the sum of money is the thing to consider. It is nothing, of course, but, at the same time, the principle involved is that the doctors are required to pay again a license fee that has already been remitted. Moreover, I think we should protest against having the expense of the administration of the narcotic law placed upon the doctors. This, I believe, is absolutely unnecessary, and should not be

done. We are doing our best to carry out that law. We are all, in this Association in favor of it; and it has done great good, undoubtedly. But I think that we should not be called upon to pay a retroactive license; that we should not be called upon to pay this additional license, as a matter of simple justice. I believe that we could consider ourselves at this time as much more in a position to show our objection to it, as the legislative body of the State Medical Association. In fact, I told the deputy collector that I would take it on myself to bring this matter up before the gentlemen of the House of Delegates. If the Government needs the money, it has a right to tax. We admit that. But I say that we should not be expected to pay a repeated license for which we have remitted; nor should the amounts be increased, even small as they are, so that the burden of it may be on the medical profession. Therefore, I make a motion that it is the sense of the House of Delegates that we are not in favor of this increased license, fee, on the ground that it is unjust and inequitable to the medical profession. (The motion was seconded.)

DR. : I would call attention to the fact that it is the law, and we have to pay it, regardless of what the tax being paid now is. The law went into effect in January, and was passed by Congress.

DR. CHEYNE: I want to say that we are simply expressing our opinion on the law.

DR. KNIGHT: Dr. Cheyn's motion is in direct line with a recent editorial in the Journal of the American Medical Association, which, when I read it, I appreciated the force of. Now this law was passed as a public health measure; but, in order to give the Government control, they were compelled to couple with it the revenue feature, which they did in the first instance, in the shape of a license tax of one dollar a year. In addition to the benefit by this narcotic law, we are having forced upon us a great deal more work. We have to write more prescriptions. We must make an inventory of the narcotics on hand when we apply for the license; and we must be worried to death by addicts, semi-addicts and patients who would be insulted if called addicts. The law does not benefit the doctors, but it does benefit the public at large. It is a good law. We are glad it has been passed, and believe that it is doing a good work and that in another generation it will do away with the morphine habit. If the Government finds that a dollar a year is not sufficient to enforce this law properly, would it not be more equitable for them to make an appropriation covering the deficiency and let the people who are benefited by it pay the freight? because it really benefits the people, and not the doctor.

Dr. Cheyne has brought out the fact

that it is actually a law. Constitutionally, Congress cannot pass an *ex post facto* law, which the Government calls a retroactive law. But no matter what they call it, we have to pay it.

The way to get at this matter is to pass Dr. Cheyne's motion as expressing our feeling on the subject, and then go a little farther, and ask the doctors to communicate in some way with Senators and Representatives of South Carolina, making the request that they amend this law. We could petition our members of Congress to amend the law at the next session, and reduce the amount back to one dollar. It is not a question of the amount, either, but of the principle. There are 150,000 doctors in the United States, and two dollars apiece from them makes a big item; but it is an imposition on the doctor, and makes him pay more than the amount necessary to give them control of the law.

Therefore, I would offer an amendment to Dr. Cheyne's motion: That the physicians be requested to write to the Senators and Representatives to have the law amended.

DR. WRIGHT, of Dillon: Would it not be just as well to have the Secretary send copies of this resolution to each of our Senators and Representatives in Congress, as coming directly from this body?

DR. HAYNE: Dr. Cheyne, do you accept that amendment?

DR. CHEYNE: I think that the expression of opinion as I put it is necessary first, and then the publication of that as Dr. Knight suggests, will be sufficient to carry out his idea.

DR. HAYNE: Do you insist on the amendment, Dr. Wright?

DR. WRIGHT: The publication in the Journal of the Association or in the daily press would not bring the matter to the attention of our Representatives; but if they got a number of personal letters or a copy of the resolution sent by the Secretary of our Association, it would forcibly impress them with the need of an amendment to the law.

DR. CHEYNE: Is that additional to the resolution.

DR. WRIGHT: Surely.

DR. CHEYNE: Then I accept it.

DR. BARNEY HEYWARD, Columbia: I should like to call attention to a very important fact relative to this additional tax on the physicians of the State. You will remember that, so far as this license is concerned, the fiscal year begins July 1st, and ends June 30th. That is the fiscal year for this license. Now if you will all pause long enough to read this notice for the additional dollar and a half, you will see that that license covers the time from January 1, 1919, to June 30th, 1919, for one dollar and a half. It is just as well, while discussing this matter, to recall that we had already paid one dollar for a license for the fiscal year beginning July 1, and ending June 30,

1919. We will divide that, again, into two periods of six months each. That original tax of one dollar included fifty cents to be applied for the first period, to December 31 1918, and to the second period, from January 1, 1919, to June 30, 1919, respectively. Therefore, this law was passed to make this additional tax retroactive. It made it retroactive from January 1, 1919; and our official office in Columbia sent a man to ask physicians to pay the dollar and a half that they were taxing us, an additional tax of fifty cents, which they had no right to do, making our total tax three dollars and a half. The annual license required from physicians now, from January 1st, 1919, according to the law, shall be three dollars. Having paid the one dollar at the beginning of this present fiscal year, we are now called on for a dollar and a half additional. The tax is three dollars and a half, or fifty cents more than the law requires. That is a fact.

DR. HAYNE: Is there any further discussion? If not, all in favor of the resolution will say "Aye"; opposed, "No." The motion is carried and the resolution adopted.

Is there any further Miscellaneous Business?

Gentlemen, in reading the names of the committees, I overlooked a committee whose report should have been heard, namely, the Committee on Necrology. That committee, this year, has a most sad duty to perform for this Association. Dr. D. L. Smith, of Spartanburg, is the Chairman; and Dr. W. F. R. Phillips of Charleston, and Dr. Olga Pruitt, of Anderson, are the other members. Is the Chairman of the Committee present? Committee on Necrology, Spartanburg: Mr. President, I am afraid that this report will not include as many names as the number of losses we had this year. If any are left out, I wish that the members would report them, so that I can include their names in the report so as to make it complete.

Dr. Smith read the report, which was Dr. D. L. SMITH, Chairman of the Committee as follows:

It is my sad duty to report the loss by death of an unusual number of our members since the last meeting of this Association. It was during that period that Spanish influenza swept the country and the epidemic did not fail to take its toll among physicians. Indeed, it probably was peculiarly fatal to them, because it first exhausted them by imposing merciless demands, which, it is needless to say they met heroically to the limit of endurance and become themselves easy victims of the disease.

Those who fell, we might say, while at the post of duty on the firing line, and thereby gave the uttermost measure of sacrifice in devotion to the service of their plague-stricken people, were the following well-known practitioners:

H. M. Babb, of Honea Path, on October 13, 1918.

Charles F. Black, Bamber, on October 25, 1918.

Rivers Clayton of Hopkins.

Jno. J. Cleckley, of Bamber, on January 7, 1919.

M. Shingler Dantzler, of Eloree, on October 24, 1919.

Stewart W. Pryor of Chester on December 27, 1918.

E. O. Taylor, of Greelyville, on October 23, 1918.

Wm. Garner White, of York, on October 12, 1918.

W. T. Briggs, of Aiken, on October 6, 1918.

W. T. Briggs, of Aiken, on October 6, 1918.

W. E. Pelham, of Newberry, on October 6, 1918.

Harleston R. Simons, of Charleston, on October 21, 1918.

While influenza claimed the above as a special sacrifice we might say, from the medical profession, yet there were others who passed away during the year through other causes.

M. J. D. Dantzler, of Elloree, on October 11, 1918.

J. R. Ware of Greenville, October, 1918.

Haryvey E. McConnell, of Chester, October, 1918.

H. E. Russell, of Easley, on May 16, 1918.

R. J. Patterson, of Bennettsville, on February 24, 1918.

O. B. Mayor, of Newberry.

The unusually large list of deaths precludes for lack of space and time an adequate expression in this report of our sense of loss on reference to each individual or record of honor due to each. The untimely death of young men like Rivers Clayton at 30, E. O. Taylor at 37, and Wm. E. Pelham at 39, cut down by epidemic just when rapidly attaining position of wide and valuable service to their communities, emphasizes for us the unsparing nature of the disease they bravely fought. The loss of Stewart W. Pryor, already eminent as a surgeon and hospital builder, yet scarcely past the prime of a life that promised invaluable additional service in coming years was a particularly severe blow to the profession, but in the general community life of his town, county and state, so that his passing has been widely felt.

It was in the fullness of years and as veterans, whose long record of able and faithful service had ripened to maturity, that R. J. Patterson, O. B. Maye, and M. J. D. Dantzler came to life's close. A pioneer in the region he served, Dr. Dantzler grew with his community and became one of its most honored and valued citizens.

Dr. O. B. Mayer, one of our ex-presidents of the South Carolina Medical Association, rendered a conspicuous service in the establishment of our present State

Board of Health, and Board of Examiners. He was untiring in his efforts in establishing the various anti-tuberculosis leagues in every county of our state.

Not yet past the prime of life was Harvey E. McConnell when death overtook him. He was the first to diagnose pellagra in South Carolina, and was instrumental in calling attention of the world to the widespread distribution of this terrible scourge. He was the beloved physician, a man who seemed to know no limit in his capacity for work and undoubtedly exhausted his life prematurely in willing and faithful service to all in his community who suffered and called upon him for aid.

In York, William G. White and in Pickens county H. E. Russell had achieved for themselves such places in the honor and affection of their people as makes them sorely missed today. They were men, who took public spirited and active part in promoting many things that looked to the upbuilding of their respective communities. J. J. Cleckley, H. M. Babb and D. M. Dantzler were among those who laid down their lives in sacrifice, while doing their utmost to stay the epidemic that quickly attacked and cut them down. For them death was untimely, cutting short careers of unmeasured value to the communities they served.

The above list of deceased members of the Association is exceptionally long for a single year. The losses, were heavy in proportion to our members, but when we reflect that not less than two-thirds of them died as brave men and true, staunchly fighting an enemy as threatening and deadly to our people as an invading army, we may well take pride in the fact that the high traditions of the medical profession in South Carolina have been gloriously sustained by its members during time of stress and danger. All honor to the men who flinched not from duty, though danger and death was their portion. They fought a good fight and their memory will long be fragrant among the people in whose service they died.

MINUTES. HOUSE. OF. DELEGATES FLORENCE, S. C., APRIL 15TH, 1919, CONTINUED.

DR. HAYNE: Is there any further business before the house? It is customary to have the election of officers after dinner. Dinner, you know, put people in a much better humor and also gives an interval in which the various nominations may be carefully canvassed and discussed; so that, if it is your pleasure, I will entertain a motion for a recess until three o'clock this afternoon. We will meet promptly and get through all our business, and then we will go down to the fish fry and enjoy that, and afterwards go to Dr. McLeod's reception and get ripe. (Laughter).

Adjourned at 12.30.

SECOND SESSION.

The meeting was called to order by the President, Dr. James A. Hayne of Columbia, at 3 p. m.

DR. HAYNE: Are the members of the Credentials Committee present? They are Drs. Timmerman, Carpenter and Tripp. We have to have a meeting of that Committee, in case any other members should come in. While the Secretary is waiting for someone to bring his books, I have a communication that I want to present. This is a very important thing. We did not get the report from Dr. Aiken on the venereal disease problem. It was sent Sunday evening, but not delivered to me until dinner time today. As a new departure in the state, I think that this short paper would be timely; and while waiting for the other part of the minutes, I may read it.

It was moved and seconded that it be read. Carried.

The President then read the following report on the venereal disease problem by Dr. C. B. Akin, passed Assistant Surgeon in the United States Public Health Service.

DR. HAYNE: I wanted to bring that before you, because it is a new departure and something that we must take cognizance of. The State Legislature was unanimous in wishing to deal with this matter, and passed what is probably the most strenuous law regarding the care and protection of people from venereal diseases of all the laws ever passed by the Legislature. It passed almost without comment, because it seemed so obvious that it was necessary to protect people against syphilis and gonorrhea.

I do not believe in working a willing horse to death, or in making a Ford to go as far as possible with a limited amount of gasoline; but I am asking the Committee on Credentials to act as tellers in this election.

The Secretary: In addition to the regular delegates who are entitled to vote, there are the Councilors, the Chairman of the State Board of Health, the Chairman State Board of Medical Examiners, and the President and Secretary of the State Medical Association, who are also entitled to vote. If any delegates have come in and have not presented their credentials, they may do so now. It might be well to determine the voting strength of the house by calling the list by counties and letting the delegates answer.

DR. HAYNE: Gentlemen, the House of Delegates will come to order. The first business before the meeting is the election of the President. Nominations are in order. The vote will be by ballot.

DR. J. RODDEY MILLER, Rock Hill: On behalf of York County, I desire to present a name. The modesty of this doctor prevents my saying much in his favor, but he is a physician who has served this Association in the past in a number of capa-

cities; who has served in the County Society and in the State Board of Medical Examiners for a number of years; and who has served his country creditably as a physician. When his country called, he entered the service as first lieutenant, and soon began to rise. He kept rising until now he is lieutenant colonel. I desire to present the name of Dr. E. W. Pressley of Clover.

DR. GOTTLÖB A. NEUFFER, Abbeville: York takes great pride in her son; but I want to remind him and his associates that he is only an adopted son of York; and, as an adopted son of Abbeville, I second the nomination of Dr. Pressley.

DR. TRIPP: I move that the rules be suspended, and that the President cast the unanimous ballot of the Association for Dr. Pressley, as President for the coming year.

The motion was seconded and carried.

DR. HAYNE: Gentlemen, I take great pleasure in passing the ballot of the Association, unanimously nominating and electing Dr. Pressley for President of the South Carolina Medical Association. (Great applause).

DR. E. W. PRESSLEY, Clover: My friends it would be less than the truth to say that I appreciate this honor — very much less than the truth. Equally, it would be less than true to say that I do not regret it, for two or three reasons. In the first place, almost anybody (and I am proof of it) can be a lieutenant, a captain, a major, or a lieutenant colonel; but it takes a real man to be a sure-enough doctor. My main reason for saying this was that I was a lieutenant colonel. The second place, if I have a long suit, it is not in being a presiding officer, but in working the hot air bellows; but while I am on my feet, I want to congratulate the Association, and the medical profession through it, on the fact that of all the professions and occupations represented in the United States at the beginning of the war, there were only two that were ready with their job, who did not require a long and difficult preliminary training in order to get them ready. These professions were that of nursing, among the ladies, and of medicine, among the men. From the very first day that we were called out, we took up our job and did it; and let me say that not only were we ready to take care of the army, but we were just as ready to take care of the civilian population, despite the numbers of men who went to the army. It is just as true today that the physicians who, on account of family or community circumstances, were compelled to remain at home, were as truly and certainly and conscientiously doing their part in the maintenance of the struggle as were those who donned the uniform; and those who stayed at home and struggled—and let me say today that it would have taken more effort to have stayed at home than

to have gone into the army, and I know that I am not alone in that feeling—had just as important and dangerous work to do as did those who enlisted. It is also true that of those who stayed at home and died in the conflict that we have just been waging against influenza, physicians and nurses, it can just as truly be said that they are dead upon the field of honor as it can be said of any hero who fell beneath the stars of Gettysburg, who drew his last breath in the Chateau-Thierry fight, or who looked for the last time on earth in the hell of the Argonne. The administration of our air service is under fire, under investigation; the administration of our ship program is under fire, the administration of the ordnance and commissary departments is under fire but never yet until now, and not now, has the administration of the medical service, either at home or abroad, been under fire. As far as the public knows and as we know ourselves, it can be said of these two professions that they did what they could; and greater encomium can be passed on no man than this, for he can never meet in air or earth, in judgment or in inference, more than what was said on one occasion of the humble act of a lowly woman, "She hath done what she could."

Now in reference to the election, let me say that, putting my dependence on the help and long suffering of the profession in the State, I will try during the next year to demonstrate the wisdom or the unwisdom of the choice that you have made as best I can. (Applause).

DR. HAYNE: We have next the nomination for First Vice-President.

DR. TIMMERMAN: I nominate Dr. D. H. Smith, of Florence.

The nomination was seconded. It was moved and seconded that the nominations be closed and that Dr. Smith of Florence, be elected by acclamation. Carried.

Dr. Hayne formally announced the election of Dr. Smith as First Vice-President.

Dr. T. L. W. Bailey of Clinton was nominated as Second Vice-President; Dr. L. C. Shecut of Orangeburg, as Second Vice-President; Dr. C. A. Mobley of Rock Hill, as Third Vice-President.

In each case, the same procedure as in the case of the President was carried out, these gentlemen being declared unanimously elected.

Dr. E. A. Hines of Seneca, was unanimously elected to succeed himself as Secretary-Treasurer, and expressed his thanks.

The election of Councilors resulted as follows:

First District—A. E. Baker, Charleston.
Third District—T. L. W. Bailey, Clinton.

Fifth District—M. J. Walker, Yorkville.
Seventh District—S. E. Harmon, Columbia.

All these gentlemen succeeded themselves in their respective positions.

On the State Board of Medical Examiners, Dr. J. T. Taylor of Adams Run, was

elected to succeed himself as the representative on the Board from the First Congressional District; Dr. Beauregard B. Lancaster of Fingerville, was elected as the representative of the Second Congressional District. There were two nominations made for representatives of the Third Congressional District, Dr. Frank Lander of Williamston, and Dr. P. G. Ellisor of Newberry. This necessitated voting by a ballot. At first, Dr. Lander was declared elected by a vote of twenty-six, as against twenty-five for Dr. Ellisor. was found, however, that one person not entitled to vote had cast a ballot; and this made it necessary to do the voting again. The second ballot resulted in twenty-four votes for Dr. Lander and twenty-two for Dr. Ellisor, and Dr. Lander was declared elected.

When the Fourth District was reached, Dr. H. L. Shaw of Sumter and formerly of Fountain Inn, the representative of that district, arose and spoke as follows:

Dr. H. L. SHAW, Sumter: About eleven years ago, I was elected from the Fourth Congressional District to the Board of Medical Examiners; and I have served continuously in that capacity ever since. I appreciated very much at the time the honor conferred upon me, and have appreciated it all the way through. Now I have moved from the Fourth District. I am no longer a resident of it, having moved over in the Seventh District. When I left the Fourth District, I wrote to the Secretary of the Board of Medical Examiners, and offered my resignation, asking that he declare the place vacant at this meeting, which he did, in a way. Now, gentlemen, I want to offer my resignation as the examiner from the Fourth Congressional District, so that the way may be perfectly clear for you to elect a man from the Fourth District. Living in the Seventh, I do not feel that I should represent the Fourth. I hope that I am understood to appreciate fully the honor conferred upon me, but I respectfully tender my resignation as examiner from the Fourth District.

It was moved and seconded that Dr. Shaw's resignation be accepted. Carried.

DR. HAYNE: Dr. Shaw's resignation is regretfully accepted, and there is now a vacancy in the Fourth District. Nominations to fill this vacancy are in order.

Dr. Lancaster nominated Dr. Baxter Haynes of Spartanburg, for this office, who was unanimously elected. For the examiner from the Fifth District, to take the place of Dr. Pressley, the President-elect, Dr. John I. Barron of Yorkville, nominated Dr. R. Roddey Miller, of Rock Hill, who was also unanimously elected. For the Seventh District, Dr. J. J. Watson of Columbia was nominated by Dr. George H. Bunch of Columbia; and Dr. J. H. Taylor of Columbia, was nominated by Dr. Rice of Columbia. The balloting resulted in thirty-five votes for Dr. Taylor and twelve for Dr. Watson, Dr. Taylor was declared elected.

Dr. Carpenter nominated Dr. E. M. Whaley of Columbia, to succeed himself as the ophthalmologist on the State Board of Examiners of Opticians and Optometrists, and he was unanimously elected.

Dr. Lancaster made a motion that the Secretary be instructed to convey these recommendations to the Governor. The motion was seconded and carried.

DR. HAYNE: The next business is to decide upon the place of meeting for next year.

Dr. WILLIAM C. BLACK, Greenville: At the last meeting of the Greenville County Medical Society, a unanimous resolution was adopted requesting the delegate from the Society to extend an invitation to this Association to hold its next Annual Meeting, in 1920, at Greenville. I also have letters of invitation from the City Council and from the Chamber of Commerce, which I will read.

Dr. Black read these letters which were as follows:

City of Greenville, S. C.,
April 10th, 1919.

State Medical Association,

Florence, S. C.

Gentlemen:—

I understand that the Greenville Medical Association will invite your honorable body to hold their 1920 annual meeting in the City of Greenville and the purpose of this letter is to extend you an official invitation from the City Council of the City of Greenville that your annual convention of next year be held in our city.

Greenville County and the City of Greenville in particular would be delighted to have you gentlemen pay us an official visit as we recognize that it would be no small honor to have you.

Of course, it goes without saying that we will exert every effort to make your visit one of pleasure and we shall entertain the hope with much pleasure that our invitation will be accepted.

Again assuring you of our strong desire in having you meet in our city, we are

Yours truly,

H. C. HARVLEY,
Mayor.

Now, Mr. President and Gentlemen, Greenville City and Greenville County are the most progressive City and County in South Carolina. Greenville City has more paved streets than any other city in South Carolina. Greenville County has more hard roads and top soil roads than any other County in South Carolina. Greenville City also, gentlemen, is the center of the Southern Textile Association which meets one year in Greenville; and the next, in Boston, Mass. Greenville City has the finest and largest Textile Hall in the South. The Hall has a seating capacity double that of any other hall or public building in South Carolina, the building having cost two hundred and forty thousand dollars. Now, gentlemen, on behalf of the Greenville County Medical Society and on behalf of the City

Council of Greenville, and the Greenville Chamber of Commerce, I hereby extend a most cordial and hearty invitation to this Association to meet next year in the city of Greenville.

DR. M. J. WALKER, Yorkville: I move that we accept the invitation. I must say that I have never heard such a speech about a city in my life in which the fair women were not mentioned.

DR. HAYNE: Did you have a second to your motion, Doctor?

Are there any further invitations?

Dr. HENRY L. STUCKEY, Sumter: I have heard of things being good, being better and being best. My friend, Dr. Black, had a good speech all ready and prepared. The place that I am going to name is the best place, where we have beautiful women, young and old. We remember your visit before. I think I saw the President smile and I think he has recollections of that visit. That was in our young days. I cannot begin in a few words to enumerate what we have there. I cannot make a long speech. The place that I am going to name is one that, when I name it, I know will all vote to go to—Sumter.

DR. J. H. TAYLOR, Columbia: Like Caesar's wife, we have no explanations to offer about our city. I will not name our city. We have more politicians there, more convicts there, and more crazy people there than in any city of the State of South Carolina. I am delegated by the Columbia Medical Society to ask you to meet there. We will have there, beside the unusual pleasures that Columbia will offer, other very excellent things that we can promise. We have the material in Columbia to entertain you as long as you will stay there.

DR. E. W. CARPENTER, Greenville: It is with deep regret that I arise to announce that this will be my last appearance before you this session, and to plead with you to consider very seriously this matter and decide to come to Greenville we want you there, and think that we can make your stay very pleasant. With the older heads, the memory and the fragrance of your last meeting there must still linger; and we hold out a hope of the repetition of that meeting to the younger men. I think that is a sufficient inducement.

DR. WALTER CHEYNE, Sumter: I regret that Sumter has suffered by not having had a meeting before for several years. We are going to have it next year, and we come to you with the most earnest, heart-felt invitation that I know the older members, and I hope the younger, will carry away with them. We ask you, not only the medical profession, but the whole city of Sumter, including the Chamber of Commerce. All will be pleased to have you come.

DR. N. B. EDGERTON, Columbia: I have wanted to invite this body to Columbia for the last two years, but we failed to

do it on account of lack of room. From now on, however, we are going to have plenty of accommodations in Columbia. As you all know, it is very centrally located; and we feel that we can have next year the best meeting that the Society has had in recent years. We can entertain you with very good clinical material during our meeting. We hope you will give this invitation serious consideration.

DR. R. A. MARSH, Edgefield: I believe that Columbia is the proper place to meet, because it is the most central, and the men from all parts of the state can get there easily.

DR. TRIPP: I did not intend to say anything, but I am very anxious to attend the meeting of the Association: You all know that is my delight. This trip has nearly broken me, and I made it in a Ford. I know that if I am alive, I can go to Greenville. To show the inconvenience of getting to Sumter, I will tell you that I asked a policeman how I could get to Florence by way of Sumter. He said, "Sumter? I never heard of that place." I asked the conductor on the car, and said "I want to get to Florence." He said, "I think you go by Eastover, Brooklyn and Lexington County." I said, "No, I want to go by way of Sumter." He said, "There is no road that way." You can get to Greenville any hour you want to, and that is what makes a meeting a success.

DR. EDGERTON: Dr. Tripp's argument holds good for Columbia.

DR. TRIPP: No, they do not know in Columbia where Sumter is.

DR. BLACK: If my memory serves me right, Columbia has had this Association twice since Greenville had it. Greenville has not had it for twelve or fifteen years, and this makes the second or third invitation that has been extended.

DR. HAYNE: It is gratifying to feel that we are welcome somewhere. Last year, it was doubtful whether we could go anywhere; but Florence took us in. You have such a number of cities to choose from that it is going to be rather difficult to choose. The cities are Greenville, Sumter and Columbia. Prepare your ballots.

DR. WALKER: The motion for Greenville was before the House. We could vote on that.

DR. HAYNE: Was there a second to that motion.

You have heard the motion of Dr. Walker that we accept the invitation of Greenville.

A motion was made to table Dr. Walker's motion.

A vote was taken; and the Chair being in doubt as to the outcome, the question was voted on again by acclamation. A division was then called for when the President announced that the "No's" appeared to have it. The count, made by Dr. Carpenter, resulted in the rejection of the motion to table Dr. Walker's motion. The

original motion of Dr. Walker that Greenville be the place selected was then put to a vote. The "Aye's" appeared to the Chair to have it, but a division was again called for, and the count showed twenty-four in favor of Greenville as the next place of meeting, and twenty opposed.

DR. HAYNE: By a vote of twenty-four to twenty, Dr. Walker's motion is carried, and Greenville is the next place of meeting.

It was moved that the choice be made unanimous. The motion was seconded and carried.

DR. HAYNE: The next business to be settled is the time of meeting. There has been some discussion about that, and this ought to be taken into consideration. We are meeting in April, and it is beautiful weather; but usually, at this time of year, we have the worst weather possible.

DR. BLACK: It never snows in Greenville in April.

DR. HAYNE: It does in Rock Hill.

The reason that these meetings were held in April was to favor the medical students, who were graduating in March join the Association immediately after at that time. They were supposed to after their graduation. Now they graduate in June, and it is thought that we should change the time of meeting to July or August. The roads are in better condition then, and people can come to the meeting in automobiles. I have no choice whatever in the matter, but I should like to have a motion as to the time.

DR. W. P. TIMMERMON, Batesburg: I move that the time be the same as in former years.

The motion was seconded and carried.

DR. HAYNE: This completes the election. The next thing is Miscellaneous Business. Uncompleted Business.

The Secretary: Here is a communication from the American Medical Association.

Here the Secretary read the two letters from the A. M. A. about the relief of distressed physicians and their families and about the welcome of returning physicians, respectively.

DR. HAYNE: Gentlemen, you have heard these letters. What shall we do with the information contained therein?

It was moved that it be accepted as information. The motion was seconded.

The Secretary: Does any member of the society know whether there is any systematic way of giving relief to physicians in distress in this state? In Baltimore, Philadelphia and other cities, relief funds have been organized for a hundred years.

This other matter may become more and more acute as time goes on, because there is a good deal of moving about of physicians throughout the United States. So far as I know, no action has been taken by any society or hospital in this State to make it more difficult.

DR. TIMMERMAN: I think that the average physician in this State feels very

kindly disposed towards the men in the service; and, personally, I, for one, should be very glad to see all of my competitors return.

The Secretary: I should like to transmit to the American Medical Association the fact that South Carolina feels kindly disposed towards the returning physicians.

Dr. Timmerman: I move the adoption of the following resolution:

RESOLVED, That it is the sense of this meeting that we feel kindly towards those in our profession who are serving their country.

DR. ———: Is it necessary for an ex-army officer to pass the State Board?

DR. HAYNE: He ceases to have any right to practice as soon as he ceases to be an army officer. I mean, he cannot practice simply on account of having been an army medical officer. There was a ruling made by the Board of Regents of New York State that they could practice if on active duty, but not otherwise. That would not apply to all states.

The resolution offered by Dr. Timmerman was that we cordially welcome our returning brethren from the army, and that no impediment will be put in the way of their practice by the societies, hospitals or otherwise.

The motion to adopt the resolution was seconded and carried.

DR. SMITH: I do not think that anyone in the State realizes or appreciates bad roads more than do doctors; and I wish to offer the following resolution:

RESOLVED, That we transmit to the Legislature our hearty endorsement of the Good Roads Bill presented at the last session.

DR. TIMMERMAN: I think that the wording of the resolution is unfortunate. If we say that we favor the building of good roads, it will be all right; but do not let us say that we favor any particular bill. I think that would impolitic and unwise.

DR. SMITH: I am willing to accept Dr. Timmerman's reconstruction of the resolution.

DR. POLLITZER: I will second the motion that this Association endorse the proposition to have better roads in South Carolina, and that this resolution be sent to the Legislature.

The motion to adopt the resolution was voted on and carried.

The Secretary: I have here a communication from Dr. Robert Wilson, Jr., chairman of the Committee on Hospital Standardization.

The Secretary read this communication, which was as follows:

Charleston, S. C., April 14, 1919.

Dr. E. A. Hines, Florence, S. C.

Dear Dr. Hines: At the last minute I am prevented from getting off this afternoon, so that I shall not be in the House of Delegates tomorrow. It was my intention to state the situation with regard to the standardization of hospitals and to

explain why our committee has done nothing as yet. Also to point out the importance of the work and among other things to suggest that our State Board require a hospital interne year as a prerequisite for admission to the practice of medicine in this State. It seems to me that it is time at any rate to discuss this matter in the House of Delegates even though no immediate action be taken. I shall be very glad if you will present the report of the committee to the House of Delegates in my absence.

ROBERT WILSON, JR.

DR. HINES: I would say, as a member of the Committee (although Dr. Boozier is better posted than I), that a good many states are requiring a hospital interne year now; and it is growing, year by year. It looks as if it would be universal soon.

DR. POLLITZER: I would suggest that the Board of Examiners, during this coming year, discuss the feasibility of it, and find out whether we have a sufficient number of hospitals where internes in sufficient number could be accommodated and have given them proper facilities for completing their education. Many of our hospitals are private institutions, and we do not know whether they could obtain sufficient facilities or not. I move that the matter be left to the Board of Examiners.

The motion was seconded and carried.

DR. WM. F. LANEY, Lancaster: It might be well for them, in their questionnaire, to ascertain how many applicants coming up for examination have had at least a year of internship. Many take the examination, and afterwards go out and get a year as a hospital interne. I do not see how you could require it, unless it were required before they get their diploma.

DR. HAYNE: I have seen the crying need of more physicians in the rural districts of South Carolina. The remuneration offered them is not very large, and what is exacted of them before they can receive their remuneration is very great. If you make a man go four years to a medical college, and then take a year of internship before he can practice in a country place, he is not going there. There are not attractions enough for him. Now we are having difficulty in getting anyone to take care of the rural population of the state. During the influenza epidemic, the people took care of themselves the best they could. If a man goes to a good college for four years, he ought to be able, during that time, to have laid the groundwork for the practice of medicine. That is all that he should be expected to do.

DR. BLACK: I want to say a few words, if not out of order. I think that it would be a bad idea to make a boy serve an internship in the hospital for two years before being eligible to appear before the State Board of Examiners.

When a boy goes to college and spends four years, he is, when he gets through, better qualified to stand the examination by one of those State Boards than he ever will be afterwards. I have in mind now two boys, my brother's sons, in Spartanburg, both of whom graduated, and both of whom got two years of internship; but as soon as they graduated at Jefferson College, Philadelphia, they made a bee line for the State Board of Medical Examiners and took their examinations, and then went back and served, each, a two years' internship. The elder spent two years there, and would have spent three, if it had not been that he went into the army. The younger went to the Mavos', and is there now. I think it would be a hardship to make a boy take a year's internship before going before the Board of Examiners, for the reason just stated. He is better prepared immediately after graduation than at any later time. Most boys who have studied medicine take from one to four years' internship in the hospital; but do not make them do it before you admit them to eligibility to go before the State Board.

DR. BUNCH: It would be an ideal procedure to have every doctor have training as an interne before beginning to practise; but there are many ideals that we cannot attain. That is peculiarly true in South Carolina. We have very few large cities or large hospitals, and have not sufficient hospital facilities to train the boys. Many hospitals are not public ones. If the service were a charity service, the interne would get good training, because he would be under a chief, and would be instructed and supervised. But in Columbia, the interne would get little training, because there is no such service. Every man has his private patients there. For the present, at least, I think that it would not be feasible.

DR. TRIPP: The last speaker said that a student graduating at a reputable medical college and getting an average of 75 can be bright enough to practise. The State Board has no authority to put a hospital training on him. The colleges have increased their literary education, as you know. Dr. Parker, during his presidency, at Greenville, made the remark that no one but the rich in South Carolina could study medicine. You make this statement truer. You have seen the need of doctors lately, and all of you know of bright young men in the rural schools who would like to study medicine and cannot afford it. As for the rich, the prospect of becoming a cotton mill president is too attractive to them to let them study medicine.

DR. HAYNE: This is simply an informal discussion. The matter is to be taken up by the Board of Medical Examiners, who will report to the House of Delegates at our next meeting.

DR. WM. F. LANEY, Lancaster: The society has been so democratic in its actions that I feel like congratulating it on its business sessions proceedings.

Adjourned at 4.45 p. m.

After adjournment, the members visited the hospital of Dr. McLeod. At 6.30, they were taken in automobiles to the Pine-wood Club, to partake of a Pinebark Fish Stew, an institution peculiar to Florence. In the evening, they attended a reception at the house of Dr. McLeod.

DR. HAYNE: We will now have the report of the State Board of Medical Examiners, of which Dr. A. Earle Boozer, of Columbia, is the Secretary, the other members of the board being Drs. Henry H. Wyman, Aiken (president); H. L. Shaw, Fountain Inn; J. J. Watson, Columbia; John Lyon, Greenwood; J. T. Taylor, Adams Run; E. W. Pressley, Clover; and J. Moultrie Brailsford, Mullins.

A B S T R A C T S

RED CROSS GIRDLES THE GLOBE

Historians who have been commissioned by the governments and universities of several lands to compile histories of the world war and the peace settlement, include among the material from which to write their volumes, the documents and records of the Red Cross.

One of these documents of the Red Cross, which is just now attracting more than an ordinary amount of attention, is the resolution which states the peace program of the Red Cross societies of the world, who bind themselves in support of an endeavor "to spread the light of science and the warmth of human sympathy into every corner of the world." The text of the resolution, which was adopted by the Inter-Allied Red Cross Conference in session at Cannes, France, appears in the June issue of *The Modern Hospital*, Chicago, Ill. It reads as follows:

"We have carefully considered the general purposes of the committee of Red Cross societies whereby it is proposed to utilize a central organization which shall stimulate and coordinate the voluntary efforts of the peoples of the world through their respective Red Cross societies; which shall assist in promoting the development of sound measures for public health and sanitation, the welfare of children and mothers, the education and training of nurses, the control of tuberculosis, venereal diseases, malaria, and other infectious and preventable diseases, and which shall endeavor to spread the light of science and the warmth of human sympathy into every corner of the world and shall

invoke in behalf of the broadest humanity not alone the results of science, but the daily efforts of men and women of every country, every religion and every race.

"We believe that the plans now being developed should at the earliest practical moment be put into effect and placed at the disposal of the world. In no way can this be done so effectively as through the agency of the Red Cross, hitherto largely representing a movement for ameliorating the conditions of war, but now surrounded by a new sentiment and the wide support and confidence of the peoples of the world and equipping it to promote effective measures for human betterment under conditions of peace."

Fifteen of America's most prominent health specialists, acting with the distinguished physicians and scientists of other allied countries, subscribed their names to the resolution. They are as follows: Dr. William Welch, Dr. William Palmer Lucas, Lieut.-Col. William F. Snow, Dr. Hugh S. Cumming, Dr. Samuel McClintock Hamill, Dr. Herman Michael Biggs, Dr. Fritz B. Talbot, Col. Richard P. Streng, Dr. L. Emmet Holt, Dr. Wycliffe Rose, Dr. Frederick F. Russell, Dr. Edward R. Baldwin, Dr. Livingston Farrand, Lieut.-Col. Linsley R. Williams, and Dr. Albert H. Garvin.

AMERICAN GIRLS WITH SERBIAN RED CROSS MISSION.

The American Red Cross nurse, whose noble ministering to the American doughboy on the battle front, made her the "Rose of No Man's

Land," has gone into the darkened suffering provinces of Serbia to care for the typhus-stricken thousands in that far-off land, and now she is hailed again as the Evangel of Mercy.

At the bedside of sick and wounded soldiers from Austria, and civilians—men, women, and children—of Herzegovina, Bosnia and other small states there may be seen the trim American girl in her Red Cross nurse's costume. In the ward with her will often be seen American doctors. A country burdened with plague and epidemic, wanting in supplies for the maintenance of health and for treatment of the sick, and lacking sufficient food and clothing, accepts with deep, quiet gratitude the ministrations of the American doctors and nurses.

The Red Cross Mission in Serbia is in charge of Capt. E. T. Thwaites of Milwaukee, Wis., and has relief stations at Ragusa, Spalato, Sarajevo, Mostar, and other points, says The Modern Hospital, Chicago, Ill. The Red Cross Mission is turning its attention to clothing the destitute, caring for the sick, and improving sanitary methods with a view to the prevention of typhus. It is cooperating with the United States Food Famine Commission which is distributing flour and fats to the poor.

The available equipment in the emergency hospitals is primitive in the extreme. Until the American Red Cross and Allied relief agencies in Europe undertook to relieve the suffering, the medical and surgical supplies and surgical dressings were crude. In some cases paper surgical dressings that had not been sterilized were in use. Many patients were dying daily from infections caused by the use of unwashed and unsterilized surgical dressings.

The assistance which American nurses and doctors are giving has

been very timely. The precautions against contagion and the better methods of care and treatment for typhus patients are beginning to show results in reducing the amount of sickness.

MUSIC IS MEDICINE FOR SOLDIERS.

The discovery has been made that music as a curative in the treatment and care of convalescent soldiers has sometimes been the one medium through which the disabled soldiers could be placed on the road to recovery and health.

The treatment of shell shock has been made easy by interesting the sufferers in music, either as listeners or players. The current number of The Modern Hospital, Chicago, Ill., relates some of the experiences in the use of music by those who are carrying out the government program of rehabilitation for disabled soldiers. J. W. Harting writes that "music has a distinct place as an educational factor in any organized recreational program, for frequently it is the spark which kindles those higher impulses in men which, sympathetically fostered, develop into the big, noble qualities. No matter what the degree of the man's incapacity, he can enjoy music and derive benefit from it."

The Red Cross has been called upon by the government to assist in giving entertainment to the men in the convalescent hospitals. The pretty girl in the Red Cross uniform who attracts the soldiers around the piano in the recreation rooms, or the musically inclined patient who interests his mates in singing or playing, figures in the entertainment plans of the Red Cross. Instruments of all descriptions have been furnished in the convalescent hospitals and the interest of professional

musicians who volunteer their services for instruction have helped to make the work a success.

"The universal love of music," writes Mr. Harting, "offers endless possibilities in the way of objective recreational work. Provided it be encouraged under proper guidance, it may be a valuable factor in reconstruction. It is best not to allow disabled men to indulge in it merely as a recreation, but to divert their interest toward an objective, for too much recreation which is simply of the time-killing variety is a dangerous thing, even for our convalescing heroes."

JUSTICE FOR THE CRIPPLED.

The art of being happy and useful, though crippled, is the normal, natural heritage which should be the cripple's right—not the attitude of hopelessness and dependence which the cripple too often acquires as a result of the thoughtless attitude of society in looking upon every cripple in much the same way as persons look upon a healthy but useless beggar, according to Helen I. Hoppin, of the Milwaukee-Downer College, of Milwaukee, Wis.

The war has given the cripple and his able-bodied associates a new understanding, she declares, writing in the June issue of *The Modern Hospital*, Chicago, Ill. The spectacle of the cripple working in industry side by side with men better equipped physically has created a sympathy between individuals which must be converted to a broad sympathy between cripples as a class, and those who are sound.

Rehabilitation for cripples in civilian life, she declares, is just as necessary and valuable as rehabilitation for disabled soldiers. Instead of the cripple becoming a poor man or a public charge, he becomes a self-supporting, independent citizen, a producer, and a

contributor to the good of society.

New enthusiasm lights the minds of crippled men and women who before the war felt keenly the unsympathetic attitude of the public at large. Denied then the right to work and live as the equal of men and women not so unfortunate, they now see opportunities to gain a foothold in the business and industry.

Democracy wins new force when its crippled members live and thrive upon the same footing with those not disabled. The burden which social and charitable agencies have been obliged to carry because society has heretofore discouraged the cripple, disappears and the benefit of the cripples' work and activity increases the wealth of the communities.

"On the reconciliation of the cripple to his new relations with the industrial world," says *The Modern Hospital*, Chicago, Ill., "depend all his future successes—success in physical reconstruction, in training for workmanship, in vocational placement, and in his final settlement in society. The mental attitude is more than a sentimental matter. It has a physical and an economic effect, and demands attention from the medical and the vocational standpoint. It is the most vital demand in the program for the rehabilitation of cripples that the war-born unity between the classes be cherished and made to include a new good will between the crippled and the sound."

SICK ROOM TO BE HOSPITAL AUXILIARY.

Every sick room in any city or town will be made an auxiliary of some hospital in the neighborhood, under a plan which Louis J. Frank, superintendent of Beth Israel Hospital New York city, Israel Hospital of New York Citys, asks the hospitals of the country to a-

dopt. Sick persons whose means will not permit their removal to a hospital will still have opportunity to avail themselves of the x-ray or laboratory features of the hospital, or the diagnostic skill of the hospital staff, either at home or as an out-patient at the hospital dispensary.

Superintendent Frank writing in *The Modern Hospital*, Chicago, Ill., points out the opportunity to make hospitals more serviceable to families of their neighborhoods if the hospitals of a city will consolidate their activities so that each will be providing a neighborhood service in a prescribed zone. The hospital will then serve as a health center and become more effective as an agent for community betterment.

By making every sick room part of the hospital, the relations of the physicians and hospitals will be rendered more cordial. The physician will be more ready to send his patients to the hospital dispensary or to a hospital ward for treatment, if he knows that he will not lose the patients. The trouble with the hospital system of today, says Supt. Frank, is partly due to the fear of the physician that cases referred to the hospital will be taken away from him, or at least handled in such a way that he will have no opportunity of knowing the course of the disease, whether his diagnosis is correct, how the true diagnosis was arrived at, or what is the ultimate outcome.

WHEN HOSPITALS BECOME HEALTH CENTERS

Make each hospital in a community a health center and a life extension institute for its neighborhood, advises the superintendent of a New York City hospital, who has fault to find with the institution which stands isolated and apart in its community. As health

centers, he believes hospitals would render their utmost service to the community.

"By seeking the cooperation of physicians and by educating the public," writes the superintendent in the June issue of *The Modern Hospital*, Chicago, Ill., "we could so arrange that each hospital would be like another life extension institute. Here the ailing would seek counsel and the physician instruction. The poor sick would come here to the out-patient department, or would be referred to the ward. From this establishment the social worker would endeavor to aid and improve the home surroundings, and, if necessary, food and clothing, and nursing and medical attention would be furnished at the house of the patient."

Louis J. Frank, superintendent of the Beth Israel Hospital, New York city, proposes this extension of hospital service and suggests a zone system as the most practicable means of bringing citizens and the hospital into closer touch. According to Supt. Frank, physicians are as much in need of a broadened policy for the hospital, as the public is in need of the health service which hospitals could perform, if developed as health centers. Physicians frequently lose their connection with medical progress on the day of their graduation from college, says their critic. This is so because their professional relations with hospitals, dispensaries, and clinics are restricted, whereas if each hospital were made a health center all the physicians in the locality and their patients would be served by the hospital.

The patient might either remain at home, become an out-patient of the dispensary at the health center, or temporarily enter the hospital for treatment, remaining at all times under the direction of his own physician. The facilities of the hospital-

health-center, which now benefit none but hospital patients, would under the zone system be extended to serve the sick in homes of the neighborhood.

To effectively develop into a health center, a hospital must make use of its dispensary, its district service, its social service, its nursing service, and a convalescent home service, throughout its zone. According to Superintendent Frank's conception of the plan the need for volunteer workers in the social service and district services now operating, would be removed or their number will be reduced.

WAR ON HIGH HEELS IS BEGUN

That high heels on women's shoes are threatened with abandonment by many women wearers and by manufacturers, is a statement for which the National Board of the Young Women's Christian Association is authority. Manufacturers only meet the demand and are not openly advocating the change to low heels, but the Y. W. C. A. says the demand is growing for comfortable shoes for women.

The National Board, through the health division of the Bureau of Social Education of the Y. W. C. A., has started a national campaign among its members to popularize a style of shoe which conforms to the normal lines of the foot, says *The Modern Hospital*, Chicago, Ill., in the June issue. The Y. W. C. A. expects to create a demand for this shoe among its membership, which numbers 400,000 women. The manufacturers have been notified to keep their ear to the ground because 400,000 women, it is declared, can influence the popular taste in matters of style.

Ridicule of the pencil-point shoes and high heels that tilt the human foot to the angle of that of a horse's hoof is one of the talking points of

the Y. W. C. A. campaign committee. Every woman who wants to wear the "normal line" shoe must be able to purchase it, says the committee. With this in mind they have had a conference with shoe manufacturers and dealers who make the shoes and determine the styles. Shoe makers are asked to produce a low shoe with a low heel and flexible shank that will allow enough exercise of the muscles of the arch to keep them strong—a shoe with enough room for the toes and a straight inner border, because the foot is naturally straight on the inner side.

The shoe must be attractive, it must appeal to the discriminating taste of women who are accustomed to wearing only the shoe approved in the mode of style, and it must be of a quality and fineness of finish to make it suitable for both day and evening wear.

The war brought the low heel into more general use among women than at any previous time. If the war had gone on for a long enough time, say the exponents of the new style, the public might have seen the same departure in the styles of women's footwear as has come about in making the tight waist a thing of the past.

HOSPITALS GIVE MORE PASTRY TO SICK.

Hospitals are beginning to include more pastry and more leguminous foods, or vegetable casein foods, in their dietary as a result of studies conducted by scientific commissions. Pastry and rice, as well as leguminous foods, are excellent for sick folks and convalescents.

The alimentation of the sick in hospitals has been the subject of investigation by a special scientific commission appointed to study and report upon the essential and most desirable

alimentation which should be provided in the hospitals of Italy. The dictionary defines "alimentation" as the act of giving nourishment. Milk and milk products, it is stated, form a basis of alimentation for the greater number of sick of all hospitals. The problem of providing sufficient quantities of milk and milk products of good quality is consequently considered of great importance.

The Modern Hospital, Chicago, Ill., publishes in the June issue an account of the studies by the commission. Condensed milk, it was learned, forms a good substitute for cow's milk. The production of goat's and ass's milk is encouraged.

After milk, eggs are regarded as the most valuable food for sick people, considering the nutritive value and digestibility. The subject of meat has been studied without the possibility of giving more than a general conclusion as to the value of meats for sick people. The condition of the individual patient is always a factor in determining how much meat the diet should contain.

Meat broth is not so valuable as is generally supposed, so the Italian scientists say.

Sugar is a most valuable and necessary food material, and the commission advises that in case of scarcity, all sugar should be reserved for the hospitals and for the sick. Maltose and saccharose may be used as substitutes. Grape sugar in the form of sterilized grape juice, condensed grape juice, and grape honey is a food material of excellent properties, not only for its high nutritive quality but also for its palatable taste. As a food for the sick, the commission believes that grape sugar in its different forms may be used to replace milk.

The commission recommends that in the distribution of food in all communities, preference as to quality and

quantity should always be given to the hospital.

MORE HOSPITAL BEDS ARE WANTED.

The extent and character of need for hospital beds in the cities and towns of the United States will be studied in detail and plans devised by which each community can be provided with an adequate number of hospital beds per thousand population, under a plan which has been approved by the board of trustees of the American Hospital Association.

It is announced that the Association will establish a service bureau which will offer expert advisory and consultant service to hospitals as to the establishment or conduct of hospitals, dispensaries, and the needs in a community for medical and health service in its various forms. The scope of service which this bureau will undertake is outlined in the June issue of *The Modern Hospital*, Chicago, Ill., which enumerates the following general purposes that the bureau will fulfill:

1. Investigation or survey of communities to determine and recommend the extent and character of need for hospital beds of various types and the manner in which those facilities should be organized in relation to one another and to the public health department, and to the social service facilities of the community.

2. Investigation of particular institutions to ascertain and recommend the best forms of establishment or development of out-patient clinics or social service functions.

3. Advice and recommendations, or consultant service, concerning the construction, organization, or management of dispensaries or out-patient departments of hospital.

Many hospitals, public health de-

partments, and voluntary health or charitable organizations, are trying to determine what is locally needed in the way of more hospital beds in establishing or enlarging dispensary service, or in advancing or improving other forms of medical health work, says The Modern Hospital.

Interest in all kinds of health work has been stimulated by the war and communities are promoting studies into the need of health service and medical care among all classes of the population.

DRY LAWS HIT FLAVORING EXTRACTS.

What's in a flavoring extract? Some persons answer: "Alcohol." And some states are proposing legislation under the national prohibition act so stringent as to greatly interfere with the sale of flavoring extracts. The after-dinner dish of ice cream will be minus its flavor and puddings will taste like mush.

"Flavoring extracts have a distinct place in the preparing of food and are particularly desirable in hospitals," says the editor of the dietetic column of The Modern Hospital, Chicago, Ill. She defends the use of flavoring extracts and urges that the needs of the hospital be considered before legislation is adopted to restrict the use of the extracts.

The United States army includes flavoring extracts in a list of things necessary in the soldier's ration, argues the writer in an editorial published in the current issue of The Modern Hospital. "It is scarcely necessary," she comments, "to mention the importance of palatability and attractiveness in feeding the sick.

"What use would it be to make custards and desserts if these were not flavored? These are made from foods

which are most desirable from the standpoint of nutrition—eggs and milk, or cream—but which have a bland flavor which makes them tasteless and unpalatable without the addition of some material for flavoring. We have innumerable instances of the food value of flavor, of foods which appeal because of their palatability. Maple syrup is considered by all of us to be far superior to other syrups, not because of greater nutritive value but because of flavor. . . .

"The troubles of the dietitian will be multiplied if she is asked to feed patients and employees of hospitals with only natural flavors accessible. Her bills will be greatly increased, but her troubles in preparing desserts which will be eaten will be even more greatly increased. As yet alcohol seems to be the only medium in which

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Dr. H. A. DUEMLING, Fort Wayne, Indiana, says: "I unhesitatingly recommend your Collection Service to my co-workers in the Medical Fraternity." (Grand total collections made for Dr. Duemling to February 20, 1919, amounts to \$4,759.50.)

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some of these volatile oils may be held in solution. For example, in order to hold 5 per cent. of lemon oil in solution, 80 per cent. of alcohol must be present; reducing the amount of alcohol reduces the amount of lemon oil held in solution until, with 45 per cent. of alcohol, practically no oil can be present. Such an extract will give a distinct odor of lemon and if colored yellow will find a ready sale. Several

chemical compounds have been prepared which have an odor similar to that of some fruits. Amyl acetate has an odor resembling that of banana, butyric ether that of pineapple. These, however, require the use of alcohol, but there are other mixtures of purely chemical substances which might be put upon the market and which we do not wish to use in the diet of the sick."

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EYE, EAR, NOSE, AND THROAT.

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EDITORIAL

THE HOSPITAL OUTLOOK IN SOUTH CAROLINA.

One of the marked activities since the war came to a close is the improvement of the hospital situation in our State. Quite a number of hospitals have been reorganized and new ones are being erected in various parts of the State. Among the number carrying advertisements in the Journal are the Chick Springs Sanitarium and Steedly Clinic; The Chester Sanatorium, The Pryor Hospital. We may mention also recent hospital organizations at Abbeville, Spartanburg, Orangeburg, Columbia and Union so that almost every county in the State now has access to a hospital within its own bounds.

Benedict College in Columbia announces the opening of a hospital for

the colored race. Both the Columbia and Baptist Hospitals have organized Pathological and Bacteriological Departments with full time directors in charge we understand.

The Anderson County Hospital has also organized similar departments.

Other hospitals probably deserve mention in this regard but we have not the data at hand.

The purpose of this editorial is not so much to call attention to specific instances of hospital improvement as to emphasize the great importance of the hospital standardization movement now being actively waged throughout the country. We firmly believe that every community in our State should have a good hospital though it may be a small one in many cases, but we should not lose sight of the urgent necessity to place all of our hospitals

on as high a plane of scientific efficiency as possible. The State Medical Association has a committee on Hospital Standardization which will no doubt take active steps to forward the nation-wide movement now in full swing.

DISTRICT AND COUNTY SOCIETIES WAKING UP.

As predicted in one of our recent editorials the members of our State Medical Association might confidently expect a marked increase of interest in society matters. We are glad to announce that there is ample evidence to this effect. The Editor has attended several meetings and has found unusual enthusiasm manifest. We especially noted the keen interest taken in the affairs of the societies by the younger members who had recently been in service. We see no reason

why the South Carolina Medical Association should not accomplish far more in the near future than has been done in the past.

DEATH OF DR. WALTER CHEYNE

In the death of Dr. Walter Cheyne of Sumter, the South Carolina Medical Association loses a very active member. During the early days of the reorganization Dr. Cheyne was a Councilor of the State Association, later becoming Secretary and an Associate Editor of the Journal. He was the first President of the Editors Association of the State Medical Journals. He was closely associated with the movement for giving his home town and county modern hospital advantages. In the latter months of the recent world war Dr. Cheyne was appointed by the President a member of the Advisory Board of his District.

ORIGINAL ARTICLES

ANEMIA IN CHILDHOOD.

By R. M. Pollitzer, Charleston, S. C.

IT is a well known fact that those things which are the commonest, excite the least attention. A case of Lethargic Encephalitis or Meningococcic Meningitis receives far more notice than one of Uncinariasis or Malaria. This is only natural of course, and yet because the vast majority of our patients suffer from the commoner ailments, in a way it is regrettable.

Anemia is seen so frequently that

unless it is extreme or forced upon us we generally disregard it. Parents, too many of whom suffer under the impression that one is not sick unless forced to go to bed, rarely call in a physician because of this condition. Inasmuch as anemia is generally only a symptom-complex of some underlying disease it is a difficult matter to give any figures as to its occurrence. Nevertheless we know from experience that it is often encountered and usually not traced to its source.

The pathologist rather easily classifies the anemias according to the blood picture into the two main classes of Primary and Secondary or calls the former Pernicious. But from the clin-

ical side where we ofte find that the pernicious type is secondary and that no cause can be ascribed to the secondary, it is far better to call the primary where no causitive factor is in evidence, erytrogenetic or hidden; and the secondary, symptomatic. As I shall show one of my cases which would come under the primary group as regards hematology, was really due to the hookworm. Another pernicious was symptomatic of malaria.

By anemia we mean a decrease in hemoglobin or in erythrocytes or more commonly in both. In the mildest types only the hemoglobin is affected. A marked decrease in the red is indicative of a more severe affection. In the so-called pernicious they are not uncommonly reduced below 1 million. Further the erythrocytes show changes in size, shape, staining properties and often are nucleated. An increase in the colorless cells (the leucocytes) is common, but occasionally there is a decrease, that is a leucopenia.

In general anemia is produced by one or more of the following causes: 1. poor nutrition, 2. acute infections, 3. chronic diseases especially syphilis and tuberculosis, 4. chronic poisoning as lead or arsenic, 5. hemorrhage, either a severe one or long continued frequent bleedings, 6. malignancy, and 7. animal parasites, as the malarial protozoan, the tape worm or the anchylostoma. Regardless of the exciting factor however, there are but two ways in which anemia can be induced. First insufficient production of blood, and second increased destruction of blood. The type due to animal parasites probably falls under both classes, while under the second comes anemia from inanition. This may be brought about by improper food, faulty digestion, or failure of assimilation. Taking all these facts into consideration we can readily see why anemia is so

frequent and so severe in childhood. A great many cases undoubtedly are due to mal-nutrition. The blood making organs are severely affected by disease, and "the blood picture is a resultant of the injurious influences and the reactive capacity of the blood making organs." The severest types of anemia from malnutrition are encountered at the end of infancy (or rather from the seventh month to the second year) and at puberty. Hemoglobin which is the oxygen carrying and liberating compound of the erythrocyte has iron in its make-up. "The amount of iron in both cow's milk and human milk is insufficient for the needs of the growing infant," but Nature has deposited enough iron in the liver of the nursing to last until it can digest iron-containing foods. 100 gm. of dried milk contains only 3 milligrams of iron, but the same quantity of egg has about 20, and spinach 33.

The usual symptoms of anemia are well known. Along with the yellowish-pallor there is weakness, peevishness, loss of appetite, flabby muscles, poor heart action at times and in severe cases very commonly in infants there is some edema. Bronchitis is common. The blood shows either the picture of a pernicious or a secondary anemia. Because of the variety of the signs and symptoms, frequently the diagnosis is missed and the case erroneously labeled, endocarditis or nephritis or tuberculosis. Frequently the patient is fat. As a rule the examination of the blood is necessary for the diagnosis, though of course it is suspected generally during the physical examination.

The prognosis depends primarily on the cause and the extent of blood destruction. Mild cases under proper treatment show prompt and marked improvement. The severe persist for

months and may be fatal. But it is surprising to what a degree the anemia may have progressed and yet the patient recover. Usually where the hemoglobin is below 30, and the red corpuscles reduced over 1-2 the outlook is bad.

It is not necessary in discussing the treatment to tell you to cure the malaria or rid the patient of his hookworm or cure his syphilis, but I do believe that anemia due to malnutrition is often improperly treated or not treated at all. The best form of treatment from the patients standpoint is prevention. Mothers should be taught that an exclusive milk diet unduly prolonged is harmful. Under milk I include human, the cow's and the tin can's. The reasons for the continuance of milk after the first year are several, among them being that nursing is cheap, the baby's unwillingness to try new articles of food and the mother's lack of patience; or having allowed it to choose its own diet she has been scared back to milk by a convulsion following the ingestion of canned salmon or a banana. Physicians are notoriously lax in giving directions as to the diet of the infant and child and most mothers after an attempt to extract some information either ask advice of their neighbor or buy a book on the subject. The actual treatment of a case of anemia from malnutrition is not always easy, but the general principles are simple. Hygiene and diet are paramount. Drugs are but secondary. Along with the milk and carbohydrates there must go some extra protein and fat, and especially iron containing foods as spinach, beans, potatoes, carrots, egg, meat or meat juice, and also the fruit juices. Iron and arsenic by the mouth or hypodermically are helpful. In very severe or obstinate cases transfusion may be necessary.

As an illustration of what Anemia from Malnutrition can do I present the following case-record:

Francis L. S. was seen first on April 2, 1918. His age was 15 months. He is a white male native of this State. Family History.—His parents are well and they have two other children who are in good health. There have been no miscarriages or still-births. No hereditary diseases admitted. Past History.—Full time pregnancy. Normal delivery. Breast-fed up to the present. At five and one-half months had whooping-cough. No other diseases. Present Illness.—For the past three or four months has gradually become pale and weak. Recently for a few days feeding was attempted, but it was unsuccessful. He nurses frequently throughout the day and night. He is very fretful. For some weeks the mouth has been quite sore. (On two occasions when asleep, seen from a short distance he appeared to be dead. The color of his skin was that of a corpse.) Physical Examination.—Extremely pale and flabby. Very weak, unable to sit up. Nervous system, negative. Heart, action rapid, sounds of poor quality, hemie murmur at base. Lungs, many diffuse coarse moist rales, no consolidation. Abdomen, no rigidity or tenderness, no masses or fluid made out. Liver and spleen considerably below costal arch. Eyes and ears negative. Bones, moderate radial epiphyseal enlargement, slight rosary. On admission to Baker Sanitarium the temperature was 100, pulse 140 and respiration 56. For some days later it averaged 100, 140 and 40. The urine contained albumin many hyaline and a few granular casts. On April 4, 1918, the blood examination report was as follows: Hemoglobin 15% (Dare) Reds 1,044,000 per cmm. Appearance, variations in shape, size and attaining affinity. One

small nucleated red cell seen. Color index 0.75. Leucocytes, 7,840 per cmm. Small lymphocytes 50.5, large 1.12, large mononuclears 7, polys 27.5, eosinophiles 2, and transitionals 0.5. 200 cells were counted and no parasites seen. The blood examination was made by Dr. F. B. Johnson of Charleston. To exclude the possibility of intestinal parasites the feces were examined on several occasions, but no worms or ova were found. Notwithstanding the unusual severity of the case, the diagnosis of Anemia from Malnutrition was made. Treatment was instituted at once. Weaning was ordered to be done at once but as a matter of fact it was not entirely completed for a week. First cow's milk was given in weak dilution then rapidly increased up to whole milk with the addition of sugar and arrowroot. Soon crackers, cereals, toast and beef juice were added. Orange juice was also promptly given. For 10 days all feedings had to be forced, as there was not only no appetite but a remarkably strong fight for a sick child. It generally required two or three people to get the food into the mouth and then to keep it there. I have often noticed that these anemic children who need food so badly, have an intense repugnance to it. It is an instance where nature is not a good guide. Iron citrate gr. $\frac{1}{4}$ was given hypodermically twice or three times a week for three weeks. I believe it is helpful in these cases. Fowlers solution gtt. $\frac{1}{2}$ to 1 three times daily was also administered for some time. Early to stimulate an appetite, tr. of nux vomica and dilute hydrochloric acid were given. The following clinical notes may be of interest: April 4—Taking nourishment. Spleen very large. April 11—Color undoubtedly better. Less resistance made to feeding. April 13 — Now taking 520 calories per day. April

15—Pulse stays at 120. April 19 — Good color in cheeks. Does not fight feedings. Some appetite. Sleeps well. April 22—Weight $22\frac{1}{2}$ lbs. Looks fairly well. All drugs omitted. Very hungry. Bright and active. His disposition has entirely changed for the better. The blood examination on that date, which was three weeks after my first visit, showed the hemoglobin to be 65% (Dare) an increase of 50% and the red cells to be 3,092,000, an increase of over 2,000,000, the color index being 1.00. On April 26 he was discharged apparently well excepting some pallor, and in reality markedly improved. Had his parents been able to have him remain here some weeks longer I am confident that the blood would have been perfectly normal. Since that time I have heard through a physician in his home town, that the improvement has been continuous. This report of a serious case shows at least that cure need not be despaired of even late, and further that the treatment is not too difficult to be within the reach of all.

Let me here briefly give the salient facts in the case of George M., a white boy of four years, who lived in Charleston. He was first seen at the Roper Hospital Sept. 3, 1918. And was under treatment until January 18, 1919, when he was discharged improved, but by no means well, because of the presence of many cases of influenza in the wards. Clinically he had the following signs and symptoms: Marked pallor, slight fever, slight dyspnea, rapid heart action with hemie murmur, albuminuria, and edema of the extremities. The feces repeatedly showed the presence of numerous hook-worms and their ova. His hemoglobin on entrance was 20% (Dare), the red count 1,060,000, and the leucocytes reduced to 6,800. In other words he was suffering from a severe anemia secondary

to Uncinariasis. He was treated with thymol and later oil of chenopodium. Many worms were killed and expelled, but nevertheless complete cure was not obtained. However on discharge the hemoglobin had increased to 38 and the erythrocytes to over three million. Right here permit me to state that in my opinion regardless of the drug used, heavy infections of hook-worm require prolonged and persistent treatment.

It would consume too much of your time for me to give illustrative examples of several other cases of anemia, so I shall merely mention that Peg H. at 20 months had lost all appetite, was fretful, very pale and unwilling to stand or walk. Her diet was exclusively milk and bread with a proprietary carbohydrate food added. The proper feeding was substituted and in three weeks she not only had a good color but was bright and active and walking.

Even though this brief and incomplete discussion of a very important condition by no means does it justice, yet I trust that it will stimulate an attempt to study and treat the many cases which today are disregarded.

THE DIAZO, RUSSO, AND WEISZ REACTIONS IN TYPHOID FEVER

By Francis B. Johnson, M.D., Prof.
Clinical Pathology, Medical College
of the State of South Carolina.

WITH the great increase in the prophylactic use of anti-typhoid vaccine we are being confronted with the difficulty of confirming our clinical diagnosis of typhoid fever by the use of the Widal reaction. Before the vaccine came into general use, the presence of a

positive Widal meant that the patient had had or has typhoid. Now we have the additional point to consider, whether the patient has taken typhoid prophylactic or not.

The method of making our diagnosis absolutely sure, by cultures from the blood, in which the typhoid bacillus can be found in practically every case during the first week and in 80 to 85% during the second week, is beyond the ability of the practicing physician.

We have, however, other laboratory tests which are simple and of sufficient corroborative evidence to be made use of.

The object of this investigation is a comparison of the use, in typhoid fever of the following urinary test: The Diazo Reaction of Ehrlich. The Russo-Methylene-blue Reaction, and the Urochromogen Reaction of Weisz, and the presence of these reactions in other diseases as based upon the examination made of 524 patients treated at the Roper Hospital, Charleston, S. C.

The Diazo Reaction was introduced by Ehrlich in 1882¹. The exact nature of the substances causing the reaction was not understood for a long time. The original method as introduced by Ehrlich has been modified by Green, making it more accurate in its results as an aid in the diagnosis of typhoid fever.

The exact formulas for the making of these tests solutions can be found in any text book on the subject.

The Diazo test consist in the use of two solutions, known as No. I and No. II, the urine, and strong ammonia. Solution No. I consist of a solution of sulphanilic acid in a dilute hydrochloric acid. Solution No. II is a solution of sodium nitrite in water. 100 parts of Solution No. I is mixed with 1 part of No. II, about 1 or 2 c.c. To this mixture is added an equal amount of urine and mixed, strong ammonia

is layered on top. In typhoid a garnet red ring is produced at the juncture, and on shaking the foam is of a pure pink or red color, which is more characteristic than the garnet ring. All doubtful reactions should be considered as negative. A normal urine usually gives a brown ring and colorless foam.

In typhoid the Diazo usually appears about the fourth or fifth day and lasts until the end of the third week, or temperature becomes normal, being present in about 80% of the cases. The intensity of the reaction being somewhat parallel to the severity of the case. The reappearance of the Diazo of value in point to a true relapse. In measles it is present in the majority of cases, but is not present in German measles. Less frequently it is present in tuberculosis, scarlet fever, and pneumonia. In tuberculosis while it is not present early, it is of important prognostic value in that its presence continuously offers a bad prognosis, patients usually not living more than six months afterwards. The administration of certain drugs will effect this test, chief among which may be mentioned opium, salol, and phenol derivatives. These can be distinguished from the true.

The Russo methylene-blue reaction was introduced by Russo² in 1905, the technic is as follows: Five drops of an aqueous solution of methylene-blue (1-1000) is added to 5 c.c. of clear urine in a test tube and mixed. A normal urine will only show a greenish-blue color and a positive reaction is shown by an emerald or mint green color. Neuman and Behrend³ have modified this as follows: Make an aqueous solution of methylene blue of such concentration that when thoroughly mixed it will be just translucent. Fill to just above the bowl of an

ordinary test tube with this solution, then fill the test tube with urine, thoroughly mix, and examine against a good daylight. By the authors this test is claimed to be of more value than the original.

The value of this test is said to be affected by the drugs mentioned. It may be found in typhoid as early as the second day and last until the end of the third week. It is also present in measles, and tuberculosis, and is said not to be present in acute miliary tuberculosis. The presence of blood or bile in the urine will give a positive reaction. By some this test has been strongly condemned, by others praised.

The Weisz Urochromogen test was described by Weisz⁴ in 1910, chiefly as an aid in the prognosis of pulmonary tuberculosis. However it also appears to be of some value as an aid in the diagnosis of typhoid. In this test as in the Russo there has been considerable variation in the technic as to the quantity of urine and reagent used. The usual technic calls for three 2 c.c. of urine and 3 c.c. of distilled water, and adding 3 drops of 1-1000 aqueous solution of potassium permanganate. The appearance of a canary yellow color, lasting over thirty seconds denotes a positive reaction. A second tube with equal amount of diluted urine is kept as a control. Pottenger⁵ has introduced good results by the standardization of this test as follows: Put 5 c.c. of urine (1 part urine to 2 parts water) into each of two test tubes, selected so that the column of liquid is 3.5 cm. deep. Hold over a strong white background and place 0.1 c.c. of potassium permanganate solution (1,1000) in one of the tubes. Holding the tube vertically and looking into the further end and recording any increase in yellow color at the end of 30 seconds as a positive urochromogen test.

The urochromogen test of Weisz can usually be found under the same circumstances as the two already mentioned. The three tests are not constantly present together in all cases, sometimes only one, sometimes two, and sometimes all three. Weisz states that the urochromogen test is found to precede the appearance of the diazo in tuberculosis and sometimes in the very late stages the diazo may become negative but the urochromogen test will remain positive.

The reaction produced by all three of these tests appear to be based upon precursor oxydation products of urochrome the normal yellow coloring matter of the urine. For a considerable time the nature of the substances producing these reaction was unknown, later the work of Weisz has shown that there are two urochromogens or precursors of the yellow urinary pigment urochrome. One of these, urochromogen A, which can be oxidized by potassium permanganate into urochrome; the other, known as urochromogen B, gives the diazo reaction of Ehrlich. The presence of these urochromogens in the urine is attributed to certain toxins, causing the breaking up of the tissues with excretion of incompletely oxydized material.

Our investigations have been made upon 524 cases treated in the hospital for various diseases. (See Chart No. 1). Of these there were 179 cases of typhoid in which 77.5% gave positive Diazo, 75.5% positive Russo, and 72% positive Weisz. 60% were positive to all three test, while 15% were negative to all three, giving us 85% that were positive to one or more of the test.

In 59 malarial cases 42.5% gave positive Diazo, 57.5% positive Russo, and 54% positive Weisz. All three tests positive in 46% of the cases, all

the tests negative in 34%, and 66% positive to one or more of the tests.

In tuberculosis 52 cases were examined with 30% positive to the diazo; 40% to Russo, and 62% to Weisz. Only 16% found positive to all tests, 33% negative to all tests; 67% being positive to one or more, it will be seen that most of these positive were to the Weisz, i. e., 62%.

In pneumonia 14 cases were examined, 50% positive to the diazo, 25% to the Russo, and 25% to the Weisz. 25% positive and 25% negative to all, with 75% positive to one or more.

In several other diseases an occasional reaction was obtained to one or more tests but not to all three, excepting one case of morphinism, these including meningitis, influenza, chronic interstitial nephritis, and measles. In all other diseases, including some surgical, all were completely negative, except those showing blood or bile in the urine which gave a positive Russo always, an occasional positive Weisz, but never positive diazo.

	No. cases	Diazo+	Rus
Typhoid	179	77.5	
Pul. Tb.	52	30	
Malaria	59	42.5	
Pneumonia	14	50	

Per cent.				
25 so+	25 Weisz+	25 All 3+	25 All 3_	75 for more+
75.5	72.	60	15	85
40	62	16	33	67
57.5	57.5	46	34	66

No. Cases				
Scarlet F.	2+	1+,1+	2-	2-
Syph. of St.	1	1-	1-	1+
Meningitis Ep.	3	3-	2+,1-	2+,1-
Influenza	4	4-	1+,3-	2+ 2-
Cr. Int. Neph.	11	1, 10	1, 10	1, 10
Morphinism.	1	1+	1+	1+
Measles	3	1+,	2-	1+ 2-
Others, incl. 195 surgical.				
Total examinations, 524.				

The diseases that give a certain per cent. positive reactions, that are to be confused with typhoid as malaria, tuberculosis, and pneumonia, can well be differentiated by the clinical signs and symptoms, blood examinations, and therapeutic tests.

The comparative value of the Diazo, Russo and Weisz reactions have been studied by many investigators, and the conclusions have varied considerably: probably due to variations in methods used, the interpretation of colors obtained, the effects of drugs mentioned, and other causes not fully understood. By most writers on the subject the Diazo is placed as most valuable and reliable, the Weisz of greatest value in the prognosis of tuberculosis, and the Russo of least value.

The conclusions drawn by Neumann and Behrend⁶⁶ in regard to the Diazo and Russo probably would answer equally well for the Weisz reaction. That is, we should "take the middle ground, regarding these tests as simply links in the chain of evidence."

Our own conclusions may be said to concur with these investigators in that the Diazo gives the most positive and best results in typhoid, the Russo most often present in malaria, and the Weisz in tuberculosis is of value chiefly in regard to prognosis. In typhoid the use of these tests is advocated as being of surest diagnostic value when all three are present.

Diagnosis is seldom, if ever made upon the presence of one symptom or test, it is by obtaining all facts bearing on the case that a logical conclusion is reached and a correct diagnosis made. The presence of these tests is merely confirmatory in typhoid fever and should only be taken as such. They are simple, reagents easily prepared, test easily performed, take little time, can be done by the practic-

ing physician in a few minutes, and have proven to be of sufficient practical value in confirming our clinical diagnosis of typhoid fever to be well worthy of our use.

References:—

1. Ehrlich, Zeit f klin. Med. IV, 285.
2. Russo, Reforma Med. 1905, XXI, 501. Abst. Jr. A. M. A., 1915, XLV. 363.
3. Neumann & Behrend, Arch. Int. Med. April 15, 1913, XI, 436.
4. Weisz, Med. Klin. 1910, VI, 1661.
5. Pottenger, Jr. Lab. & Clin. Med. 1916, 11, 37.
6. Neuman & Behrend, Arch. Int. Med. April 15, 1913. XI, 436.

THE EMPYEMAS OF INFLUENZA

By Julius H. Taylor, M.D., F.A.C.S.,
Columbia, S. C.

THE epidemic of measles associated with the mobilization of large bodies of men for war, and the recent pandemics of influenza with their accompanying pneumonias have presented the greatest opportunities for the study of Empyema the profession has ever had. Previous to these epidemics, pneumonia was not nearly so frequently complicated by empyema and, furthermore, it was soon noticed that in the recent epidemics the broncho-pneumonias were accompanied by a frequent and surprisingly fatal type of empyema, the mortality ranging from 20 to 60%. Clearly the condition called for a most intensive analysis to discover the nature of this unfamiliar type of infection. Thus has empyema come in for a degree of attention it has always merited but never received. Let me here acknowledge my indebtedness to the various reports from the camps throughout the country where they have had the opportunity to study large series of

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cases under the most propitious and scientific conditions from their ineptitions to the autopsy tables. As we have said, no such opportunity was ever before presented.

In civil practice the empyemas encountered are nearly always due to the pneumococcus but it was soon found that the vast majority of the new type of empyemas were due to infection by a haemolytic streptococcus and are coincident with or follow a peculiar form of organizing bronchopneumonia. The infection of the pleural cavity takes place as a direct extension from the involved area in the lung, also, oftentimes however, as Moschowitz (1) has shown, thru a minute communicating opening between the pleural sack and an abscess just beneath the visceral pleura.

The most striking feature of this new type of empyema, in contra distinction to cases usually seen in civil life, is the extremely rapid formation of the pleural exudate. Cases are reported in which a pronounced exudate developed two days after the onset of the illness.

This pleural exudate rapidly becomes filled with myriads of virulent haemolytic streptococci and in specimens obtained by aspiration a single loop would often contain from 100,000 to 200,000 colonies in plate cultures. (2).

At this early stage in the development of an empyema the case is always in the hands of the medical man and it behooves him to have a most watchful eye for the appearance of this exudate, in that one is guided largely in treatment in these cases by the laboratory findings.

Don't let anyone for a moment delude you into thinking that a pleural exudate is always easily identified, that the classic flatness, muffling of the breath sounds and changes in vo-

cal fremitus are always present, for often only the needle will reveal the true condition. Whenever there is a suspicion of an exudate into the pleura, its presence and character should be verified by exploratory aspiration. Displacements of the heart without discoverable cause call always for an exploratory aspiration for fluid. When, however, these measures fail and fluid is suspected, whether early in the disease or because the lung condition does not clear up as promptly as it should, the chest should be x-rayed, preferably a stereo-scopic view, and if a suspicious area is located aspiration should be done over this site under guidance of the picture. Particularly is this procedure of value in encapsulated collections of fluid where oftentimes by this method only may they be located.

In the early stages of this type of empyema the exudate is varicolored and only slightly turbid, occasionally it is blood tinged.

The most important advice the Empyema Commission (2) has to offer in these cases at this stage is not to operate.

However, when the fluid accumulates to such an extent as to cause dyspnoea, cyanosis and rapid pulse it should be evacuated with an aspirator as often as indicated.

Now there are certain precautions and points in technique in this simple operation of aspirating pleural effusions that it might not seem amiss to emphasize.

If there be no indication otherwise the site for puncture is in the 9th space in the post axillary line. The sharper the needle the less painful to the patient. Be careful to avoid the lower margin of the rib for it is here that the nerve and blood vessels lie.

The skin should be tightly drawn to one side before puncture so that

after the needle is withdrawn, the holes through the various layers will not lie in the same line. In this way is the entrance of air and leakage avoided. The fluid should be withdrawn very slowly and the withdrawal should cease at once on the slightest subjective distress.

Besides the very potent reason along practical lines of a lower mortality obtained by thus delaying the operation of opening the chest wall there are in addition sound theoretical grounds.

We quote from A. W. Meschowitz (1) of the Empyema Commission:

"At an early stage of an empyema the fluid is free within the pleural cavity, and there are practically none or only very slight limiting adhesions; in other words we are dealing with a free hydrothorax, or if one choose to call it, a pyothorax. If an operation is undertaken at this stage, we convert the only slightly dangerous hydrothorax into the extremely dangerous hyper-acute pneumothorax. This brings about the justly dreaded fluttering mediastinum with ultimate fixation on the opposite side of the thorax. Therefore, instead of attaining the desired object, namely to relieve the embarrassed respiration and heart action, the operation only aggravates it."

The immediate result of this hyper-acute pneumothorax is a sudden severe dyspnoea the explanation of which is found in the fact that with the admission of air and the establishment of atmospheric pressure against the side of the mediastinum, this structure with all its vital contents is drawn over to the intact side by its normal negative pressure. During inspiration it is drawn over still more while during expiration it returns only a little. Hence the intact lung cannot expand enough to draw in a sufficient quantity of air.

In those people whose mediastina

are either more inherently resistant to lateral displacement or where chronic infiltration has stiffened normally movable mediastinal structures, or, as is most frequently the case, where the lung is adherent to either the diaphragm or chest wall the entrance of air into the pleural cavity is not followed by dyspnoea.

Furthermore, in addition to the production of this hyperacute pneumothorax if the chest is opened at this early period, the patient is acutely ill with pneumonia and is in no condition to have the added burden of an operation, however minor.

Emil Beck (3) gives us further possible causes for the mortality the sudden mobilization by removal of the fluid of an acutely inflamed lung, and the secondary infection and absorption of the streptococci thru the wound surface, citing two cases of the latter as reported by the Empyema Commission. (4)

So, altogether on both theoretical and practical grounds it is better to delay operation until the patient has built his defences both mechanically, by walling off the fluid with adhesions of the lung to the chest wall, and by developing a certain degree of protective immunity, for when the fluid has become purulent it has lost much of its toxicity for the individual. This change from the early character of the pleural effusion spoken of, to a frankly purulent one ushers the patient into the operative stage and we now have to consider the best operative management to institute.

In our individual experience there have been in all, twelve cases of empyema of the various types.

The anaesthetic of choice is without question the local use of novocain or apothesine (P. D. & Co.) either for a rib resection or for the introduction of the trocha and canula as devised by

McKenna and spoken of later in detail. Following a rib resection, there has recently come into use in the camps of the country and generally in the larger hospitals, Dakin's solution to promote and hasten the sterilization and healing of the cavity.

We have had no personal experience with its use and where it has been instituted, men especially trained at the Rockefeller Institute have supervised its preparation and use. Tho not without a discordant note here and there its use seems to have been attended by very striking results. In some cases reported, the sterilization of the pus cavity has been so rapid and complete that the incision was closed by suture within 12 days of the thoracotomy.

While various methods have been devised for draining the chest in conjunction with the use of Dakin's fluid, to my mind the simplest and most striking has been designed by Hugh McKenna of Camp Pike, Ark. (5)

McKenna drains the plueral cavity by means of a No. 14 French soft rubber catheter, introduced by means of a trocha and canula just large enough to thread the catheter into the pleural cavity. The catheter is then connected with a 100 c.c. glass syringe and aspiration is carefully and intelligently carried out. If the pus is too thick for aspiration, a small amount of neutral solution of chlorinated soda (Dakin's solution) is allowed to run in.

This liquifies the pus quickly so that by repetition of this procedure the entire cavity is emptied. The Canula is withdrawn, leaving the catheter in place and 1-2 the number of c.c. of Dakin's solution are allowed to run into and remain in the pleural cavity as corresponds to the quantity of pus aspirated during the operation. This aspiration and refilling with antiseptic solution is done three times a day and twice a night.

In one of our cases we were by force of circumstances driven to repeated aspirations of one pleural sack following a resection of a rib on the other side. This was in an eight year old boy with both chests full of pus following influenza pneumonia. He was a very ill patient, markedly cyanotic and dyspnoeic.

We could of course decompress but one side and two days later was begun the careful and gradual emptying of the other side by repeated aspirations with the most painstaking care to prevent the entrance of air into the pleural cavity.

His convalescence was long but ultimately both sides cleared up.

References:—

1. A. V. Moschowitz, S. G. O. April, 1919.
2. Report of Empyema Commission, J. A. M. A. August 10, 1918.
3. Emil Beck S. G. O. April, 1919.
4. Report of Empyema Commission J. A. M. August 3, 1918.
5. Hugh McKenna J. A. M. A. August 31, 1918.

CONSTRUCTIVE MEHHODS IN INFANT WELFARE WORK.

By Miss Lillian Duke, R.N., District Nurse, Rome, Ga.

Before offering this paper I want to state it contains nothing original, perhaps every thought expressed has been expressed before. I have sought to obtain views and expressions through our own work and methods. But the structure as a whole is my view of the proper development of my subject.

First: Through the Floyd County Commissioners and others. We have chartered for twenty years and organized the "Floyd County Public Health Nursing Association" and this is one among a number of such organizations recently started to preserve in-

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fant's life. Our care starts at the prenatal period and we are responsible until the infant reaches school age—as I will explain later.

Also we are working towards maternity and child's welfare station where the mothers can come for advice. The weight and height of all infants will be kept, also record of prenatal cases.

It is impossible for an organization or infant constructive methods to exist without a common conception of purpose. The most important of unity is in determining will the objective of our efforts. Certainly we all agree that the fundamental functions of the means to this end are: 1st. The prevention of infant mortality, and at the present time we are passing through a transitional period in (the care of infants in the solution of health problems. Old established methods which have been accepted as the standard throughout the country for years are being gradually replaced.

What, after all, is infant welfare work or you might say public health work? It means the education of the public in prevention as well as the care of the sick and its infants. Its scope includes under the term everything which in any way affects the health of our community. Methods, of course, must differ according to the local conditions, but there are certain watch words to which we may all agree in our methods, zeal, interest, devotion, time and intelligence.

Through these watchwords we must construct a plan that will answer not only the needs of the day but will stand the test of the future years.

In order to construct such a plan it would be wise to consider: Past influence, Present problems, Standards and Responsibilities.

Time was in the distant past when

parents were allowed to put their children to work instead of insisting upon school attendance. Now through public interest the amount of schooling the child shall have is decided by the State. In the near future the State will probably assume the responsibility for the life and health of its infants. "The wards of the State" in early Rome, the father, not the State, had the power of life and death over the child, an old custom requiring that the new born baby be placed upon the ground, if the father desired the child to live, he raised it in his arms invoking the Goddess Levana, if not it was at once exposed to death. After the opening of the Christian era the church, not the state, began to interest itself in the infant question and began to care for orphans and children abandoned by their parents. There are no statistics to tell of the infant mortality of those days, but judging by the results of the same conditions on babies at present time it must have been appalling. Even royal babies were no exception, Queen Anne left no heir to the throne of England, yet she bore eighteen children, only one of whom survived even to its eleventh year.

With the coming to the front of prevention, various methods have been tried. Prevention means education, and our problems are not one alone of housing, or indeed of poverty as such, but I find it mainly a question of motherhood, relating chiefly, to public health nursing, and health department of cities and state. And if we would solve the problem of our infants, it would appear that we must first construct methods to obtain a higher standard of physical motherhood. The child who depends for its life in the first twelve months, not upon the state, nor upon this or that system of milk feeding, but upon the

health, intelligence, devotion and maternal instinct of the mother.

The fundamental methods have been a higher standard of special education for the nurse, with a better obstetrical service, free baby clinic or consultations, home visiting with and instruction for the mother before and after the birth of the baby.

(Special stress to be laid on maternal nursing) a clean milk supply and infant medical attention easily available.

We have learned that war measures for the preservation of infant life have been attended with remarkable results in Paris. At the beginning of the war a central office was opened for the assistance of women and babies. Seventy-four per cent. of the 16,579 births occurring during the first months of war took place in institutions. The maternal mortality was about 20% less than that of the same period in 1913, and the infant mortality was 30% less. The infants of 1914 were superior to those of previous years, averaging 15 % higher in weight. The mothers were all able to nurse their babies at first.

Infant welfare nursing is done in one or two ways, by the general visiting nurse, as part of her regular work, or special nurses, whose whole time is given to infants or children, the former is apt to be the method pursued in the small towns, the latter, in large cities, and as we go about our district of work we should not be ignorant of the most interesting subject the menace of the feeble minded girl or other defective or degenerate type which we come in contact, for this has a special bearing on the infants of the nation. We should realize that the methods must lie in reporting such continuance in another generation of such mental, moral, and physi-

cal disabilities, in the children of to-day. I have also discovered causes of delicate babies who are suffering from malnutrition in its earliest and less acute stage, the chief cause of this condition is ignorance of our mothers on the infant hygiene. This fact points to the need of infant health stations where the mothers are brought in touch with the best modern knowledge of the condition of child life. The child's whole future depends on its having proper care before and after birth, and the mother's health from that day forward depends upon it. The welfare of the next generation is controlled almost entirely by the care of pre-natal instruction and care at birth. In many places an unfortunate situation exists by which the infant becomes the responsibility of three, or four groups of nurses, his age being the determining factor in the division of this responsibility. Pre-natal nurses are responsible for its welfare before birth, obstetrical nurses give him his first care, at two weeks of age he is handed on to the infant welfare nurses who may, or may not, keep him until the beginning of his school life, the school nurse assumes the final responsibility. It often arises because different nurses have undertaken these different phases of the work, and infrequently, this well-cared-for child is nobody's responsibility between the age of two years, sometime one, and the time he goes to school. Surely this is a waste of forces. Why should not one group of nurses be entirely responsible for him at least until he enters school.

If the baby needs care, and if the child of school age needs care any arrangement which does not recognize his needs between these two ages is a loss of forces.

Many a cripple would not be dragging out a weary inactive existence

had he been somebody's responsibility at three years of age.

During these years proper diet is scarcely less important than in babyhood. Improper feeding is less apt to cause death, but it does hinder proper development, lowers vitality, and produces the under-nourished, anemic child that was so well cared for in infancy.

We need some organization effort for the protection of infants, including the child until school age.

An interesting method in infant-welfare work is the exhibit. The exhibit should include proper clothing, sleeping and bathing arrangements. Models showing good and bad housing conditions, methods of fly prevention, lectures,

I want to urge that we do outline a definite method of cooperation. I would suggest that this outline be in the form of a consistent program for

the care and protection of infants.

The program should be rich in statistics of the state work. It should include a study of the entire infant and child welfare situation, including education, recreation, as well as the care of dependent, neglected infants, it should aim to stimulate to a more general knowledge of the work, and condition in homes of the infants. Let us take the spirits of business and of love and bind them together into the formation of an infant-helping trust, into a federation of agencies headed by the business spirit of a Candler or of a Morgan, and guided by the ideals of Jesus Christ, let us dedicate this trust to the conservation of our infants.

Let us all labor together, all gathering from all, all giving to all, each for the other, and all for God, that these less fortunate children thrown on our care, may have health, life and have it more abundantly.

SOCIETY REPORTS

MEETING OF THE THIRD DISTRICT MEDICAL ASSOCIATION.

The Third District Medical Association met in its annual convention at Greenwood on July 29th, at 8 p. m. as the guests of the Greenwood County Medical Society.

We had a complete reorganization, with the following officers elected:

Dr. Rolfe E. Hughes, President, Laurens, S. C.

Dr. Wm. G. Blackville, 1st vice-president, Parksville, S. C.

Dr. C. H. Blake, 2nd vice president, Greenwood, S. C.

Dr. John R. Power, secretary and treasurer, Abbeville, S. C.

The next annual meeting will be held at Abbeville.

Dr. E. W. Pressly, President of the South Carolina State Association, was present and delivered a highly interesting and pleasing address before the convention. Dr. E. A. Hines, secretary-treasurer of the South Carolina State Association, gave us an interesting talk and mapped out the needs of the medical profession. The regular program was then entered into and we first had clinical report of cases, some very unique and in-

teresting cases and the discussion was entered into by a number of members with a deal of enthusiasm. The following subjects then came up for discussion: Dr. D. A. J. Bell, Biliousness So-called; Dr. S. C. Hays, Dichloramine T as an Antiseptic. Dr. G. P. Neel, Prostatic Difficulties in the Aged; Dr. J. W. Davis, Typhoid Fever, the Diet and Control of Fever in Same.

Every county in the district was represented and a large number of members present. Now that the stress and strain of war conditions is laxing the members are resolved to work with greater interest for the human race than ever before.

The following resolution was unanimously adopted:

Resolved, That each Medical County in this District pledge themselves to give one Public Health Day in their respective counties annually for the advancement of public health.

After the convention adjourned the Greenwood Medical Society invited the members to supper which was enjoyed very much. A unanimous vote of thanks was given the Greenwood County Medical Society for their delightful hospitality.

T. L. W. BAILEY.

BOOK REVIEW

RECONSTRUCTION THERAPY. Reconstruction Therapy. By William Rush Dunton, Jr., M.D., Assistant Physician at Sheppard and Enoch Pratt Hospital, Tawson Maryland; Instructor in Psychiatry at the Johns Hopkins University; President of the National Society and of the Maryland Society for the Promotion of Occupational Therapy; Secretary of the Maryland Psychiatric Society. Illustrated. W. S. Saunders Company, Phila. and London.

Work as a remedial measure has long been recognized as an invaluable therapeutic resource. The great war emphasizes more than could possibly have been done otherwise, the scope of work in the reconstruction therapy of the nation. This little volume is replete with practical suggestions.

THE HIGHER ASPECT OF NURSING.

The Higher Aspect of Nursing, by Gertrude Harding. 12 mo. of 310 pages. Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$2.00 net.

The author, as a result of years of her experience, has arrived at the conviction that no woman has a right to enter the nursing profession with purely selfish motives. There is a higher aspect of the profession which seems to have eluded many of those who enter upon it.

It is to this higher aspect of the subject, and to this more exalted view, that the attention and interest of the reader are invited.

DIET IN HEALTH AND DISEASE. The New (5th) Edition. Diet in Health and Disease. By Julius Friedenwald, M.D., Professor of Gastro-Enterology in the University of Maryland School of Medicine and College of Physicians and Surgeons, Baltimore; and John Ruhrah, M.D., Professor of Diseases of Children in the University of Maryland and College of Physicians and Surgeons, Baltimore. Fifth edition, thoroughly revised and enlarged. Philadelphia and London: W. B. Saunders. Octavo of 919 pages. Company, 1919. Cloth, \$6.00.

Probably no book on diet is so satisfactory to the profession as Friedenwald and Ruhrah. The work has passed through five editions which in itself speaks well of the value of the subject matter. A number of new articles have been added, among which may be mentioned those on vitamins, amino acids, acid and alkali content of food, relation of food to skin surface, milk standards,

food allergy, Sippy's diet in peptic ulcer and numerous smaller ones.

1918 COLLECTED PAPERS OF THE MAYO CLINIC, ROCHESTER, MINN. 1918 Collected Papers of the Mayo Clinic, Rochester, Minn. Octavo of 1196 pages, 442 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$8.50 net.

The papers emanating from Mayo Clinic are always looked upon as authoritative, deservedly so. The volume under review covers a wide range of subjects under the following heads: Alimentary Canal, Urogenital Organs, Ductless Glands, Heart, Blood, Skin and Syphilis, Head Trunk and Extremities, Nerves, Technic, General.

THE PERITONEUM. The Peritoneum. Vols. I and II. Vol. I Structure and Function in Relation to the Principles of Abdominal Surgery. Vol. II Diseases and Their Treatment. By Arthur E. Hertzler, M.D. F. A. C. S. Surgeon to the Halstead Hospital, Halstead, Kansas; Associate Professor of Surgery, University of Kansas; formerly Professor of Pathology, Experimental Surgery, and Gynecology, University Medical College, Kansas City, Mo. A contribution from the Laboratory of the Halstead Hospital, and from the Department of Anatomy of the University of Illinois. The price of the book is \$10.00. C. V. Mosby Company, St. Louis, Mo.

This is perhaps the most exhaustive treatise on the Peritoneum published in this country in recent years. Every surgeon and every general practitioner will find here a storehouse of information not only invaluable from an academic standpoint but many practical suggestions useful in every day practice. The make-up of the books, print, paper and illustrations deserve more than passing notice.

SYMPTOMS OF VISCERAL DISEASE. symptoms of Visceral Disease. A Study of the Vegetative Nervous System in its Relationship to Clinical Medicine. By Francis Marion Pottenger, A.M., M.D., F. A. C. P., Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; Professor of Diseases of the Chest, College of Physicians and Surgeons, Medical Department, University of Southern California, Los Angeles, California. With 86 text illustrations and nine color plates. Price \$4.00 C. V. Mosby Company, St. Louis.

The monograph is arranged in three parts: Part 1. The Relationship Be-

tween the Vegetative Nervous System and the Symptoms of Visceral Disease; Part 11. Innervation of Important Viscera, with a Clinical Study of the More Common Viscerogenic Reflexes; Part 3. The Vegetative Nervous System.

This book is an attempt to show the relationship between physiologic facts and clinical observation and is given forth with the hope that it may stimulate greater interest in clinical observation and interpretation.

GERIATRICS. A treatise on senile conditions, diseases of advanced life, and care of the aged. By Malford W. Thewlis, M.D. Associate Editor, Medical Review of Reviews, New York City. With introductions by A. Jacobi, M.D., LL.D. and I. L. Nascher, M.D. 250 pages; illustrated. cloth \$3.00. C. V. Mosby Co. St. Louis.

There is a decided field for special work among the aged and far more may be done along this line by the profession than has hitherto been the case. This book is a scientific treatise presented in a clear cut way, attractive to the reader and filled with suggestions the busy doctor may resort to in his practice.

THE HEALTH OFFICER. The Health Officer. By Frank Overton, M.D., D. P. H., Sanitary Supervisor, N. Y. State Dept. of Health and Willard J. Denno, M.D., D. P. H., Medical Director of the Standard Oil Company. Octavo 512 pages with 51 illustrations. Philadelphia and London: W. B. Saunders Company, 1919 Cloth, \$4.50 net.

We know of no work on this subject comparable from a practical standpoint. The authors write from an invaluable actual experience in New York where the public health activities are abreast of any country in the world.

TRAINING SCHOOL METHODS FOR INSTITUTIONAL NURSES. Training School Methods for Institutional Nurses by Charlotte A. Aikens, formerly Director of Sibley Memorial Hospital, Washington, D. C.; formerly Superintendent of Iowa Methodist Hospital, Des Moines and of Columbia Hospital Pittsburg; author of "Hospital, Management," "Studies in Ethics for Nurses," etc. 12 mo. of 337 pages. Philadelphia and London: W. B. Saunders Company, 1919. Cloth, \$2.25 net.

The author of this little book is an authority of national reputation and her words carry weight accorded to few writers in this country. The trained nurse and her work are under severe criticism at the present time in many quarters. Such a book as this will clear up many misunderstandings in regard to the nursing profession.

OUTLINE OF GENITO-URINARY SURGERY. Outline of Genito-Urinary Sur-

gery. By George Gilbert Smith, M.D., F. A. C. S. Genito-Urinary Surgeon to Hospital. Assistant Visiting Surgeon, Hospital! Assistant Visiting Surgeon, Collis P. Huntington Memorial Hospital; Captain Medical Corps, U. S. A.; Fellow American College of Surgeons, Member of the American Association of Genito-Urinary Surgeons and of the American Urological Association. Authority to publish granted by the Surgeon-General, U. S. A. Illustrations by H. F. Aitken. W. B. Saunders Company, Philadelphia.

No branch of medicine has advanced more rapidly than Urology and this book is a creditable contribution to the subject.

THE MEDICAL CLINICS OF NORTH AMERICA. The Medical Clinics of North America. Baltimore Number. Vol. 2, No. 6. May, 1919. Index Number. Published bi-monthly by W. B. Saunders Company, Philadelphia and London.

Some of the Clinics reported in this number are the following:

Clinic of Dr. Lewellys F. Barker, Johns Hopkins Hospital. Funicular Myelitis, or Combined Sclerosis of the Spinal Cord.

Clinic of Dr. Julius Friedenwald, Mercy Hospital. Personal Experience in the Treatment of Ulcer of the Stomach. Various Types of Achylia Gastrica as Revealed by the Rehfuess Method of Fractional Analysis.

Clinic of Dr. Paul W. Clough, from the Medical Clinic of the Johns Hopkins Hospital. Pneumococcus Sepsis.

Clinic of Dr. E. H. Gaither, Johns Hopkins Hospital. The Role of Diet in Treatment of Digestive Diseases.

Clinic of Dr. Louis Hamman, Johns Hopkins Hospital. Introductory Remarks to a Discussion of Diabetes. Serious Membrane Tuberculosis. Auricular Fibrillation.

THE MEDICAL CLINICS OF NORTH AMERICA. The Medical Clinics of North America. Vol. 2, No. 4. New York Number. January 1919. Published bi-monthly by W. B. Saunders Company, Philadelphia.

Among the interesting articles in this number are the following:

Clinic of Dr. W. S. Bandler, Post-Graduate Hospital. Sterility in Women, with Especial Reference to Endocrine Treatment of Same.

Clinic of Dr. Henry Rawle Geyelin, Presbyterian Hospital. Certain Aspects of the Modern Treatment of Diabetes Mellitus.

Clinic of Dr. A. S. S. Blumgarten, Lenox Hill Hospital. Cases Illustrating Diagnostic Problems. 1. Primary Malignant Tumor of Lung. 2. Cerebrospinal Syphilis. 3. Three Cases Illustrating Problems in Nephritis. 4. Two Cases Illustrating Diagnosis of Aortic Syphilis.

Clinic of Dr. Eugene F. DuBois, Cornell University Medical School. The Basal Metabolism as a Guide in the Diagnosis and Treatment of Thyroid Disease.

Clinic of Dr. Willy Meyer, Lenox Hill Hospital. Advanced Pulmonary Tuberculosis, a Borderland Disease.

MANUAL OF EXERCISES FOR THE CORRECTION OF SPEECH DISORDERS. Manual of Exercises for the Correction of Speech Disorders. By May Kirk Scripture, B. A. Instructor in Speech, Columbia University (Extension and Summer Session); Director of Speech Correction, Vanderbilt Clinic, Neurological Department, College of Physicians and Surgeons, New York City; Special Assistant in Speech Defects, Medical Council of New York City Children's Hospital and School, Randall's Island; Lecturer at State University of Iowa, Iowa, 1918

And

Eugene Jackson, B. A., in charge of Speech Correction at the University and Bellevue Hospital Medical College Clinic, New York City; Teacher for the Correction of Speech Defects, New York

Evening Schools. Illustrated; price \$2.00 net. F. A. Davis Company Publishers, Philadelphia.

the average educator and the medical profession, especially the general practitioner, know little of the wonderful results attained in the treatment of speech disorders. The book before us is illuminating along these lines.

GYNOPLASTIC TECHNOLOGY. Gynoplastic Technology with a chapter on "Sacral Anesthesia." By Arnold Sturmdorf, M.D., Clinical Professor of Gynecology, New York Polyclinic Hospital; Consulting Gynecologist to the Manhattan State Hospital; Fellow of the American College of Surgeons. Fellow of the New York Academy of Medicine; Fellow of the American Medical Association; etc., etc. Illustrated with 152 half-tone and photo-engravings in the text, some in colors, and 23 full-page plates with 35 figures all in colors. F. A. Davis Company, Publishers, Philadelphia.

The author has given an excellent resume of gynecologic plastic surgery. The illustrations are especially valuable and instructive.

ABSTRACTS

INFLUENZA

The bacteriology of the recent pandemic of influenza and its complications is the subject discussed by W. H. Park, New York (Journal A. M. A., Aug. 2, 1919). The epidemic first appeared in Europe, and naturally the influenza bacillus of Pfeiffer was first thought of as a casual factor. The reports of the study were conflicting. In some localities it was rare, while in others it was found in almost every case. A few observations in France and England indicated the presence of a filtrable virus, at least in some cases. As such had already been demonstrated to be occasionally present in common colds, this announcement only opened one more line for investigation. The possibility that there were two similar diseases existing in Europe made it advisable to concentrate on

the bacteriology in this country. Here, there was no question as to the unity of the epidemic sweeping over the land. The conditions that must be fulfilled by the guilty germ are that it must be uniform in its characters throughout; but some bacteriologists fail to appreciate this. The most delicate test we have for identity of bodies, and the agglutinins produced are usually selected as the best evidence of identity or dissimilarity. With filtrable viruses we have to depend on the use of some susceptible animals or human volunteers, and if successful in producing infection, test for specific immunity. The uncertainty as to the pandemic virus is increasing since the epidemic has passed, and Park reviews some of the investigations recorded in the literature, the results of which favored the influenza bacillus as a primary or secondary invader. Pneu-

mococci were universal but of different types. A careful survey of all the literature leaves the same impression as the studies reviewed by Park. There is no proof, he says, that any one germ is present in all cases, though the influenza bacillus has the lead among possibilities, and the idea persists that, owing to the difficulty of isolating it, the failure to detect it may be due to its being overlooked. Park gives the result of the study of the subject in the laboratories of the New York City health department, made for testing the immunologic reactions of isolations. This investigation was made with extreme care, and the results seem to show that influenza bacilli, like pneumococci, have gradually, through the years, altered on the mucosa of healthy carriers into many strains, having many essential characteristics in common, but are still different in their susceptibility to specific immune substances, and perhaps in other reactions. "It seems right to assume," Park says, "that the infecting strain is in great excess during infection and that in nearly every case the colony tested will represent the infecting strain, and that the proof that the patients are infected by different strains indicates almost certainly that bacilli were present before and that some virus created conditions permitting the latent bacilli to attack the tissues. These results were obtained from cases in different regions and outbreaks and appear to us to throw the influenza bacilli in the cases studied as clearly into the class of secondary invaders, as the discovery that the pneumococci isolated from other cases are separated into the different fixed types places them in the same position." He believes that other organisms under suspicion in different localities will be found to fail to meet the requirements of the primary agent in the epidemics.

There is no question as to the accuracy of the results nor their interpretation. To demonstrate a given strain as the cause of a pandemic, it will have to be shown that it is different from other strains in normal persons. Finding of a single strain in normal and diseased individuals would be only moderately presumptive evidence.

INFLUENZA

W. H. Frost, Washington, D. C. (Journal A. M. A., Aug. 2, 1919), discusses the cyclic pandemics of influenza and remarks on the lack of systematic records. In the long intervals between the epidemics, the influenza becomes inexplicably confused with other respiratory infections, so that the records of prevalence, and even of mortality, are lacking. In their absence, statistics of mortality from the group comprising influenza and all forms of pneumonia come the nearest to the desired data, but furnish only an index instead of a measure of the prevalence of influenza. He gives such chart records as are available in this country, namely, those from Massachusetts and certain large cities, which indicate the beginnings and part of the course of the late epidemic, together with some records from the army authorities. There were mild epidemics in Europe early in 1918. The mortality statistics of the disease in this country are available for many camps and cities. There are wide variations, both in the incidence of the disorder and in its mortality in different localities, in civil as well as in the soldier population. In general, the epidemic resembled that of 1889-1890, developing first in mild, scattered outbreaks, and later in a severe world-wide epidemic. It has been notably different, however, in the respect that there has been a much higher frequency of pneu-

monia, with a consequent higher mortality, especially among young adults. The recurrence are characteristic of such epidemics, and it is probable that we may have at least local recurrences in the near future, with an increase over the normal mortality of pneumonia for perhaps several years, and we would do well to prepare to meet this situation. The efficacy, however, of the preventive measures is not proved, and we shall have to continue depending on the apparently sound principles applied in the past. A scientific study of the disease must not depend on recurrences, but should be continued for a series of years, since a knowledge of the intervals is essential to the study. We should have a better differential diagnosis of endemic influenza, besides more careful observation and recording of the relatively mild and indefinitely diagnosable aggravations of similar respiratory disease.

INFLUENZA.

L. A. Conner, New York (*Journal A. M. A.*, Aug. 2, 1919), reports on the symptomatology and complications of influenza, as shown by data from seventy-two base and general hospital reports to the Surgeon General of the U. S. Army. Two features stand out: first, the singularly uniform clinical picture of cases in the same camp, and second, the striking agreement by observers in the various hospitals as to the characteristic features of the disease. The period of incubation, in the majority of cases reported as to this feature, was given as three days or less, and in several reports it was stated as not usually more than twenty-four hours. It is safe to call the incubation period short. Reports are practically unanimous that the onset is sudden in most cases, and the initial symptoms surprisingly constant and uni-

form, being chilliness, prostration, fever, headache, backache and pains in the limbs. Somewhat less frequently there was an irritating dry cough and sore throat. To this must be added a characteristic mental state. Prostration was frequent and one of the most constant symptoms, and cough and hoarseness were present at some time in nearly all cases. The character of the sputum varied considerably. Coryza was less constant. Epistaxis was a striking symptom in about one-fourth of the cases. The respiratory rate was little disturbed and the temperature notably low. The physical signs were not infrequently normal throughout the attack, and when normal it was usually in the latter part of the illness. One of the characteristic and striking features was the slow pulse. In a certain small proportion, persistent tachycardia occurred. The blood pressure was generally unchanged, but, in a few reports, a tendency to low diastolic pressure was noticed. Lenkopenia was a characteristic, even in the presence of a complicating pneumonia. The most conspicuous nervous symptom was pain—frontal headache, severe backache, and pain in the limbs. Mental dullness and somnolence marked the early stage with usually some depression of spirits. Delirium and meningismus were rare. Severe neuralgic pain, noted in the epidemic of 1889-1890, was but little seen. Gastro-intestinal symptoms were inconspicuous, being noted as frequent in only one of the seventy-two reports. Sore throat was a frequent complaint, although tonsillitis was not the usual type. Another frequent and interesting set of symptoms were those of the skin: flushing or erythematous rash was common in the beginning, sometimes resembling scarlet fever, and sometimes discrete macules of the face and trunk. Herpes of the face and lips

was seen in about 10 per cent. of the cases. Injection of the conjunctiva was a common early symptom, and pain and stiffness in moving the eye-balls. The urinary symptoms were not apparently important. Convalescence was gradual, varying in length and sometimes requiring several weeks. It is difficult to draw a sharp line between what we should consider complications and simple influenza. The most important was pneumonia, which Conner thinks should be considered rather as a complication. It occurred in between eight and 23 per cent. of the cases and varied greatly in its manifestations. The rise of temperature was gradual, and chill was not common in the beginning. The relations between the symptoms and the dominating organisms, especially *Streptococcus hemolyticus* and *Staphylococcus aureus* were marked. Among the symptoms especially mentioned are the cyanosis, the comparative absence of pain, leukopenia, and the fulminant character of many of the cases. Other respiratory complications were laryngitis, purulent bronchitis, pulmonary abscess and pleurisy and empyema. A rather remarkable complication was subcutaneous emphysema, usually seen in severe pneumonia cases. Serious heart symptoms were not usual. The persistent tachycardia seemed to be purely functional. Of nervous symptoms, meningitis seems to occur only in cases complicated by pneumonia. Mental depression and slow convalescence were often pronounced, but in general the psychoses seemed to be sequels rather than complications. Arthritis was rare as a complication, but the pneumococcal type was occasionally seen following pneumonia. Ear and sinus disorders are mentioned as rare. To one who has had experience with the epidemic of 1890, as well, there can be doubt as

to the identity of the two. The present one, however, has been much the most virulent, attacking a larger proportion of the population with a greater incidence of pneumonia and somewhat greater apparent mortality. The cerebro and the gastro-intestinal types, concerning which so much was written in the former epidemic, were rare in the present one, which has been, for all practical purposes, only of the respiratory type.

MEDICAL GRADUATE EDUCATION

C. M. Jackson, Minneapolis (Journal A. M. A., Aug. 2, 1919), speaking of the modern growth of the tendency towards specializing, with its advantages and its disadvantages in narrowing the point of view of the physician and in increasing the expense to the public, a tendency certain to increase, says it is evident that our present supply of specialists is far below that indicated in the medical directory. The demand for well trained specialists in all lines is great, and the problem is how to meet it. Opportunities for hospital positions are still limited, and while an adequate general medical education is a first essential to avoid the narrowness that a limited field brings, there are good educational and social reasons why the graduate training for special work should begin as early as possible. The graduate of a first class medical school, with subsequent hospital internship, may safely be left to proceed to train himself in his chosen special line. The first step should be to increase his knowledge of the underlying sciences, and the principle that clinical medicine as an applied science is more true of specialism than of general practice. Where is the education in the fundamental sciences to be obtained, except in the laboratories of

the larger universities? And while there are some fairly good laboratories as regards pathology and bacteriology, but few have any one who is capable of guiding the student in systematic advanced study. The other laboratories necessary for graduate training are not provided for, and, on account of the great expense involved, it would appear impossible for the independent postgraduate school to provide the means for advanced scientific work. Even the universities which have the staffs and facilities have not generally sufficient consideration to this need. The essential thing is that each student should have his work well outlined and supervised, and on account of the relatively small number of students seeking it, this instruction must be, necessarily, chiefly, individual in character. If the student can also have an opportunity of acting as teaching assistant in these fundamentals, so yet in the beginning of its possibilities, much the better. Medical science is as The importance of the research spirit is emphasized by the author. Some knowledge of foreign languages, at least a reading one, is necessary, and some form of certification. There is no unanimity as to what degree should be given; Jackson seems to favor Sc. M. or Ph.D., with specification as to field of proficiency.

MAXILLOFACIAL SURGERY.

V. P. Blair, St. Louis (Journal A. M. A., Aug. 2, 1919), describes the work done in the late war in the treatment of maxillofacial injuries. While the same surgical principles apply as in other wounds, this type calls for special dental splints, or splints with dental attachments, and the cooperation of the surgeon with a dental surgeon is generally needed. With this fact in view, the Surgeon General, with the

cooperation of both surgeons and dentists, established special short courses in the Northwestern University, Dental School, the Evans Dental Institute, the University of Pennsylvania and in the Washington University; but the selection of teachers was not confined to these faculties. Not the least important results were the data obtained as to the qualifications of the officers for this work, which requires also the cooperation of the ophthalmologist and rhinologist. The measures taken by the French and British authorities and the organization of operations in France are described. In the early part of the work, there was a shortage of competent surgeons for this line, and specialization was overshadowed by the more vital problems. After Aug. 20, 1918, the service became really established, and from that time on the work was well under way, though handicapped by the lack of much of the special equipment. There are no definite figures, as yet, of the number of cases treated, but, using as a basis the average of the cases of former wars, and those of the British forces up to Christmas, 1917, it seems probable that this type constituted at least one per cent. of all wounds. There have been evacuated to this country, up to date, about 600 patients, and practically no more remain abroad. Of these 600 cases, the patients in 260 have been discharged. There are now in hospitals 339 patients whose treatment will necessarily average from about two weeks to 90 days. The use of camouflaging masks was not a great success, as far as Blair knows. There are none he thinks now actually in use by our men. At each of the four centers in this country, photographers, sculptors and artists are attached to the service. Blair notices the importance of early treatment and the danger of infection as a

cause of delay in healing. Altogether, patients in 75 cases have undergone or will require grafting for bone loss from the injuries, and several instances are especially mentioned.

INFLUENZA.

M. J. Rosenau, Boston (Journal A. M. A., Aug. 2, 1919), gives an account of experiments made at Gallop's Island by officers of the U. S. Navy and U. S. Public Health Service, in which he himself took part. The experiments were made on a hundred volunteers, mostly aged between 18 and 25, only a few of them around 30. None of them had had influenza. Rather cautiously they proceeded to administer the pure culture of influenza bacillus into the nostrils of a few volunteers as a preliminary experiment. As this proved negative, they selected 19, had gave each of them a mixture of 13 different strains of the Pfeiffer bacillus, some obtained recently from the lungs in a necropsy, while others were old subcultures; but each of them had a different history. Suspensions of these organisms were sprayed with an atomizer into the nose and eyes and into the back of the throat during inspiration. Each subject received some billions of the organism, but none took sick. Next, they used the virus from cases of the disease and the details of obtaining it are given, as also the method of administration, some of it being swallowed. None of the men became sick. Injections of blood were also used, with the same negative result, as also the introducing of ten of the volunteers into a ward of the U. S. Naval Hospital at Chelsea, containing thirty beds, all occupied by influenza patients. Each volunteer had intimate contact with at least ten of the patients, inhaling the breath and receiving his cough directly into his face.

The patients were in different stages of the disease and all the cases were fresh. None of the volunteers was taken ill. Experiments were also made at Portsmouth and at the Deer Island Training Station, with the same negative results. One of the officers, however, collected material from six supposedly incubation cases, in none of which did influenza develop; but he himself, who had escaped the disease elsewhere, came down with a clinical case. Rosenau thinks we should not draw positive conclusions, since there are many factors to be considered; their patients may have been non-susceptible or immune. A similar experience was that of Dr. McCoy and Dr. Richey at Goat Island, San Francisco, who were also unable to produce the disease. There may be factors in the transmission that are not known. Rosenau says that perhaps, if we have learned anything by these experiments, it is that we are not sure we know anything about the disease.

TRANSPLANTATION OF THE URETER.

Perhaps the most pitiable condition that man can suffer is that due to new growths in the bladder, says W. E. Lower, Cleveland (Journal A. M. A., Aug. 2, 1919). In most cases, the suprapubic drain cannot give relief, nor can large doses of opium. The only possible method is by preventing the stream of urine from passing through the bladder, and this can be done by transplanting the ureter into the loin or into some portion of the bowels, preferably the sigmoid or rectum, as near as possible to the bladder. If the transplantation is into the loin, some mechanical contrivance to catch the urine is needed, and this, as a rule, is unsatisfactory. On the other hand, if the ureter is transplanted into the

large intestine, the annoyance is less, as the spincter ani becomes adapted to the new condition and effectively controls the urine. The best technic for this operation, in suitable cases, is perhaps that of Coffey. "The operation is preferably performed in two stages, transplanting one ureter first and then waiting a sufficient time to be sure that the ureter is functioning in its new location, and to allow the sphincter ani to become adapted to the new condition, when the second ureter is transplanted. Preferably, the right ureter is transplanted first, as, if adhesions follow, as they often do, the rectum becomes more or less fixed and cannot so readily be drawn into the cut." In certain cases, a third operation for complete removal of the bladder may still better the condition and prolong the patient's life. He has performed this radical operation twice. In one case, the patient survived two and one-half years in comparative comfort. In the second case he lost track of the patient after six months, and has not been able to ascertain how long he survived. In both instances relief was immediate. In two other cases, the ureters were transplanted simply for relief, as the growth was so extensive that the more radical operation was impossible. The patients in both cases died within a short time, but relief had been obtained for the time being. If the patients present themselves early enough, the best results are possible. The division of the operation into two stages, or three, including the bladder extirpation, divides the trauma of the single stage operation to the patient's advantage. The four cases are reported. Lower thinks that, with bladder extirpation, the possibility of a complete cure may be anticipated. In the first case, that in which the third operation was performed, the growth returned and, in-

volving the intestine, carried the patient off. In the second case, the patient was comfortable and in good condition as long as heard from.

HYPERTENSION IN WOMEN.

Dr. Riesman, Philadelphia (Journal A. M. A., Aug. 2, 1919), remarks that the habitual use of the blood pressure test has surprised him with the frequency with which it has revealed hypertension in women. Most cases occur among a definite class of women, usually stout, heavy, undersized multiparae with no signs of syphilis, at the age of the menopause or just past it, of constipated habits, some suffering from intestinal indigestion. Up to a certain point, they show amazing tolerance of high blood pressure. The heart is usually enlarged, chiefly to the left. The arteries are soft, and even the retinal vessels seldom show involvement. The kidneys, so far as can be determined, are competent. This absence of gross renal or terial changes has led some writers to call this type of hypertensino "essential." A similar condition is sometimes seen in men, but in general it is less innocent. The points that stand out prominently in the etiology are multiple gestations, worry, constipation, flatulence and the menopause. Whatever the cause may be, whether of endocrine origin or toxie, the effect is an increased toniciry, gradually leading to a thickening of the vascular musculature. The inaugural symptoms are dizziness, tinnitus, dyspnea on effort, anginoid pains, palpitation, gaseous distension and vasomotor disturbances. Though several of these symptoms may coexist, the disease is often monosymptomatic at first, and in a large proportion of instances the complaints seem to have no relation to the hyperten. The patients are usually sordid, practically always

obese; the area of cardiac and aortic dullness is increased; a systolic murmur in the aortic area, transmitted upward and into the clavicles, and a ringing aortic second sound are common findings. In the later stages, a soft systolic murmur can often be heard at the apex. The temporal vessels are not usually conspicuous, though they may be tortuous. The peripheral arteries are soft, in contrast to the blood pressure, and a slight rise of temperature is almost constant. "The average age of the patient was 54. The youngest patient was 43, oldest 71. The average systolic pressure was 211; the average diastolic pressure, 105; the average pulse pressure, 106; the highest systolic pressure, 310; the highest diastolic pressure, 160, and the highest pulse pressure, 150." Of course, this is not the only type of hypertension in women. Chronic nephritis is a common cause, and cases in which the patients are less than 35 years old may generally be accredited to this cause and a worse prognosis be expected. There is also an arteriosclerotic group, and the hypertension in exophthalmic goiter and acromegaly. Riesman mentions, however, another type, similar to the one described, of thyrotoxic origin without goiter. While there is no positive proof of the thyroid cause, the symptoms suggest this origin; but, as against this supposition, iodids do not benefit, and may aggravate the condition. As regards prognosis, the essential hypertension may be called benign, but three accidents are possible and not uncommon. One is angina pectoris; another is apoplexy, usually left-sided, and the third, decompensation in the later stages. The treatment is practically avoidance of overinterference and regulation of diet, in quantity rather than quality, while drugs are of minor importance. The nitrites are not indicated in patients who do not

suffer. Iodids may be used in small doses for long periods, and, lately, Riesman has had strikingly good results in lowering tension by the use of corpus luteum. In thyrotoxic cases, rest is of first importance, and tea and coffee should be forbidden. Everything must be done in all the types to encourage the patient to avoid worry.

NEUROLOGIC THERAPEUTICS.

Certain fads of neurologic therapeutics which had their day of popularity are noticed by C. K. Mills, Philadelphia (*Journal A. M. A.*, Aug. 2, 1919). The first he mentions is the Perkins' tractors which, coming into public notice about the end of the eighteenth century, are now hardly remembered. But many years later, within the recollection of modern practitioners, the metallotherapy and metalloscopy of Burq obtained the quasi endorsement of eminent neurologists. A little later appeared the publications of Charcot and Richer, on hypnotism, which, as Mills says, belong in the same category as Murquism. He, himself, experimented with both, with the result of strengthening the views that he already held as to the importance of suggestion and counter-suggestion. The suspension treatment of tabes also interested the profession in the later part of the last century, and also received the quasi endorsement of Charcot and Giles de la Tourette of Paris, and was extensively experimented with at the Salpêtrière. It was tested and apparatus was devised for employing the method by eminent physicians in this country, but it soon passed into deserved oblivion. Mills describes his own experience in the surgical treatment of epilepsy. Very early in the practice he knew something of the efforts made on the basis of the old reflex hypothesis; children were circumcised, wo-

den underwent the operation of ovariectomy, nerves were resected, etc., to cure constitutional disorders which refused to yield to other methods. Since the facts of cerebral localization have been established, the excision of certain cerebral centers, apparently involved in the epileptic attack, was more or less performed, but paralysis seems to have been the most that was usually attained. This usually improved and would not have contraindicated operation if it had achieved its purpose of relieving the attacks. If epileptic attacks were sufficiently well observed it would be found, says Mills, that in nearly all cases such seizures begin with local spasm but this is overlooked. Of recent years, the surgeon has extended his efforts for the relief of epilepsy to the abdominal cavity, chiefly on the theory that the disorder is due to some form of intestinal toxemia, and some have gone so far as to advocate colectomy. While not expressing so positive an unfavorable opinion of these attempts, Mills says he cannot divest himself entirely of the opinion that the colon has a useful function. The opinions generally held in the profession at present, as to the effects of dental disease, seem to be considered by the author as also, to a certain extent, a medical fad. Another discredited set of operations are those of linear craniectomy for idiocy and imbecility. Neurologists and surgeons are prone to advise and undertake procedures, Mills, thinks, without due consideration of the principles that should underly them. Nerve stretching, which was rather popular a generation or more ago, also comes under his ban. Glandular therapy is also mentioned, as well as glandular removal, both of which have had their day or are having it, and Abderhaldenism, as he terms it. He seems rather

judiciously conservative as regards the beneficial effects.

THE THERAPY OF BUCAL CANCER.

Connected with the subject of the therapy of bucal cancer are two great factors. The first is that of early diagnosis—a factor of paramount importance in any case, but in none more so than in cancer of the buccal cavity. There is little excuse for failure in this respect, yet it is of frequent occurrence. There still are physicians who profess a great “fear of the knife,” and are willing to carry patients for weeks and months until the disease has made such progress that the use of a knife does, indeed, become a fearsome thing. There is a second group of men, intelligent and honest, who, because the patient gives a history of chancre or a positive blood Wasserman reaction, forget the possibility of cancer in the presence of an ulcerating sore on the tongue and lose precious time in a vain endeavor to cure the lesion with arsphenamin and mercury. The second factor to be considered is the exceedingly rich lymphatic supply of the mouth and neck. This is important for two reasons: first, the possibility of early, deep-seated metastases, and second, the difficulty which it adds to efficient use of the roentgen ray and radium. Every one is familiar with patients in whom clean excision of a cancer of the mouth associated with persistent postoperative raying of the neck by competent roentgenographers has nevertheless been followed by the early appearance of deep cervical metastases. Since the roentgen ray exerts its influence in limiting cancer metastases by causing proliferation of connective tissues and of the endothelial cells of lymphatics to an extent sufficient to obliterate the

lymph channels and tissue spaces, and also by a direct inhibitory effect on the cancer cells, it is obvious that, to a large extent, the richer and the more deeply situated the lymphatic supply, the less effective will be treatment by roentgen ray. This tendency of buccal cancer to cervical metastasis has led to the ultraradical, so-called "block dissection" for its cure, which consists in an attempt to remove the cancer and the lymphatic bearing structures of the neck en masse. High morbidity and mortality from infection, and failure to eradicate the tumor by this method, have caused many surgeons to go to the other extreme and to entomb themselves with local excision with the actual cautery or some form of high frequency current, and ligation of the external carotid artery, thus attempting to minimize recurrence by starving the tumor, and such limitation of metastases in the neck as may be afforded by the roentgen ray. While this method avoids the danger of infection to a large extent, it also fails to cure. Much has been claimed for radium in the treatment of cancer of the tongue; but while its usefulness as an adjunct to other measures is generally admitted, its dependability when applied by present methods to any but the most superficial lesions is yet to be demonstrated. In the management of buccal cancer we are, therefore, brought face to face with the one great, outstanding fact in present-day cancer therapy, namely, the utter necessity of early diagnosis, without which invasion of the rich lymphatic field of the face and neck places an enormous handicap on curative treatment.—*Journal A. M. A.*, Aug. 2, 1919.

HOW TO CHOOSE A HOSPITAL

Whether a hospital is a Class A institution or a Class D institution will be information that patients may learn for themselves before choosing a hospital in the near future, if the occasion requires.

The shortcomings of hospitals have been scrutinized by superintendents and trustees of institutions all over the country with the result that a demand has arisen for standardization. A. R. Warner, M.D., superintendent of the Lakeside Hospital, Cleveland, Ohio, declares that the defects of hospital management and administration are now fairly well known to those directly interested. He writes on hospital standards in the current issue of *The Modern Hospital*, Chicago, Ill.

The organization of some hospitals has been more highly developed than others. The service of some surpasses that of other institutions, while in many hospitals the facilities for diagnosis and treatment excel.

Standardization becomes a necessity, Dr. Warner asserts, because the public will not tolerate the deficiencies if they can be recognized. The fact that superintendents and hospital directors are aware of defects imposes upon them the duty of promoting higher standards in all that pertains to the care and treatment of the sick. Dr. Warner voices a warning that the hospitals themselves must accomplish this standardization before the public at large learns of some of the existing defects of various institutions.

SOLVING THE FAMILY'S SICKNESS PROBLEMS.

Health insurance offers the solution of problems of family finance during sickness, and the trend of the times indicates that health insurance will be

adopted as a social policy in every state, according to the statement of John A. Lapp, formerly director of the Ohio Health and Old Age Insurance Commission, in an address before the Ohio Hospital Association.

Physicians, public men, and hospitals, are called upon to see to the organization and forms of legislation which are being created to embody the principles of health insurance, and that proper plans for medical service shall be assured, says The Modern Hospital, Chicago, Ill., in its report of the Association's fifth annual meeting. The adoption of legislation to establish health insurance on the same footing as the workman's compensation was advocated by Mr. Lapp, who is the editor of Modern Medicine, and by Dr. Otto P. Geier, of Cincinnati, O.

Sickness is a tremendous burden upon the people as a whole and it falls with crushing force upon those who happen to be sick, it was declared. If sickness were evenly distributed, there would be no need of health insurance. Each person could stand the nine days of sickness which is the average for all people, but sickness falls unevenly. Twenty per cent. of the workers in industry suffer a disable sickness each year lasting more than seven days. That means in about 400,000 workers, 65 per cent. of them, or 260,000, are sick for less than thirty days; 19.7 per cent. are sick from four to eight weeks; 6 per cent. or 24,000, are sick from eight to twelve weeks; 3 per cent. or 12,000, are sick for more than six months; while 1.3 per cent. or 5,200 are sick for more than a year.

These figures indicate the need of health insurance. The worker who suffers more than four weeks of sickness is bound to be economically handicapped and large numbers are bound to be overwhelmed. Dependency and destitution follow with absolute cer-

tainty. Insurance would distribute the risk by the creation of the fund through payments by employer and employee, from which a part of the losses of wages would be paid and the entire medical care provided.

Health insurance is simply the creation of a human depreciation fund in the same manner as business now provides a depreciation fund for material things of the plant.

MUSIC SAVES SHELL-SHOCKED SOLDIER.

A soldier boy from the mountain districts of the South was slowly dying in a United States army hospital. He had gone from his mountain environment to the battle lines of France and then had been returned to this country before the end of the war in a pitiable condition of suffering due to shell shock.

The young man's nervous excitability was extreme in his hours of greatest suffering. But in his weakened condition, his excitability gradually was diminished until he made only a feeble response to suggestions or instructions from his attendants.

One day a Red Cross field worker brought in a trio of mountain boys into his ward with a banjo and guitar to entertain the patients. The dying soldier listened and tried to raise himself. It was the first interest he had displayed in things around him for many days. The lilt of the merry folk song seemed to fan the flickering life spark that had gone beyond the reach of material aids.

The banjo players came again. The boy's interest grew stronger, and he confided to the nurse that he "useter pick one of them" and that he would like to try it now. A start toward recovery began when the soldier took hold of the banjo and fingered the

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strings. Music had saved his life. The
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in the mind of the young man who so
nearly sacrificed his life from shell
shock.

The story of the soldier whose life
was saved by music is told by A. W.
Harting of the American Red Cross,
New York City, in the June issue of

The Modern Hospital, Chicago, Ill.
The curative effect of music in the
treatment of nervous disorders, and its
value in adding to the contentment of
convalescents in the army hospitals,
declares Mr. Harting, has been indis-
pensable in the rehabilitation program
of the government for disabled sol-
diers.

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SETTLEMENTS MADE MONTHLY

DR. H. A. DUEMLING, Fort Wayne, Indiana, says: "I unhesitatingly recommend your Collection Service to my co-workers in the Medical Fraternity." (Grand total collections made for Dr. Duemling to August 20, 1919, amounts to \$5,464.27.)


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EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

THE FOURTH DISTRICT MEDICAL ASSOCIATION MEETS

The meeting of the Fourth District Medical Association at Anderson, S. C., September 16th, was a decidedly successful one. This association is one of the largest in the state, and rivals in many respects the State Association in point of attendance and scientific interest. There were more than fifty doctors present on this occasion. An elegant luncheon was served at the Baptist church and a special feature of this luncheon was an address of welcome by Dr. B. A. Henry to the members of the Association who had been in the service.

The next meeting will be held at Seneca in 1920, under the auspices of the Oconee County Medical Associa-

tion. The following officers were elected:

Dr. E. A. Hines of Seneca, President.

Dr. Wade Thompson of Anderson, Vice-President.

Dr. W. B. Lyles of Spartanburg, re-elected Secretary and Treasurer.

The Program which was carried out in its main features, follows:

Programme
of the

Thirteenth Annual Meeting
of the

FOURTH DISTRICT MEDICAL
ASSOCIATION

Anderson, S. C.

September 16, 1919,

Elk's Hall, 2:20 P. M.

Officers:

Dr. J. R. Young.....President

Dr. Charles Burnett.....Vice-Pres.

Dr. W. B. Lyles.....Sec. & Treas.

Programme

Luncheon, 1:00 P. M. at Elk's Hall

"Invocation"—Dr. L. G. Cayton, Central.

Address of Welcome—Dr. C. H. Young, President Anderson Medical Society.

Response—Dr. J. R. Young, Anderson.

1. Carrell-Dakin Solution in Treatment of Compound Fractures—Dr. W. H. Powe, Greenville.
2. Some Recent Observations of Eastern Graduate Schools and Clinics—Dr. E. A. Hines, Seneca.
3. The Use of the Thomas Splint by the Field Surgeon in France During the War—Dr. W. C. Marett, Newry.
4. Treatment of Fractures—Dr. L. C. Sanders, Anderson.
5. The Examination of the Heart in Health and Disease—Dr. J. B. Townsend, Anderson.
6. Some Interesting Points on the Feeding of Infants—Dr. D. L. Smith, Spartanburg.
7. Fractures About the Elbow Joint—Dr. R. H. Fike, Chick Springs.
8. Pyelitis—Dr. T. M. Davis, Greenville.
9. Subject Unannounced—Dr. J. L. Valley, Essayist, Pickens County Medical Society.
10. Fractures—Dr. John Wallace, Easley.

THE RELATION OF INSECTS TO DISEASE

Demonstration of the share of certain insects in the causation of disease constitutes one of the most brilliant chapters in the unparalleled record of medical progress made since 1870. Conjecture has given way to assurance, supposition to verified fact. Most investigators probably believe that the greatest triumphs in this field have already been accomplished, and that

the future hardly holds in store for us very many, if any, more such momentous discoveries as the connection between the mosquito and malaria and yellow fever, the flea and the plague, the louse and typhus. It is perhaps well to bear in mind, however, as W. D. Pierce has recently reminded us,² that there are still numerous minor problems to be worked out and that co-operation and organization are especially desirable in this field. Although somewhat formidable in manner and matter, the sequence of "necessary steps" in Pierce's program contains an interesting statement of the point of view of certain entomologists. The emphasis laid on proper methods of handling experimental insects is certainly desirable. His remarks on the importance of cooperation by specialists in different fields will doubtless receive hearty approval. Some of his other suggestions seem rather cumbersome and inapplicable in the present state of our knowledge: such, for instance, as the proposal that "one might in time of an epidemic start with insects visiting excreta and attempt to ascertain whether the organism of the disease at that time epidemic occurs in any of the insects." Few investigators will maintain that the most important advances in our knowledge of insect-borne diseases have been due to procedure of this character. It is hard to believe that the author has given serious consideration to his statement that "the majority of the investigations which have been seriously undertaken to determine invertebrate carriers have been conducted on other continents than ours." We need only remind ourselves of the pioneer work of Theobald Smith on Texas fever, the memorable discovery of the role of the mosquito in yellow fever, the work of Ricketts and others on typhus and

Rocky Mountain spotted fever, and the recent work of the U. S. Public Health Service on malaria carriers, to see that such an assertion is hardly an adequate recognition of the part played by American men of science in this field.—*Journal A. M. A.*, September 6, 1919.

2. Pierce, W. D.; Necessary Steps in Any Attempt to Prove Insect Transmission as Causation of Disease, *Science*, Aug. 8, 1919, p. 125.

DID YOU ORDER A HUNDRED-DOLLAR REBUILT FORD?

Physician in the Middle West have received a circular letter from the "Anchor Manufacturing Company" of New York city, signed "per E. Maloney." The letter declares that the concern is going to sell, to a limited number of "professional men," a "fine lot of Ford automobiles" that it has purchased from the U. S. government. They are used machines, "all 1917 or 1918 models," but have been thoroughly overhauled "by expert mechanics who have had their training in one of the Ford plants." The price asked is \$100, freight prepaid! Fifty dollars must be sent with order ("Liberty Bonds accepted at full face value") and the balance is to be paid after the car is delivered. All worn and defective parts of these cars have been replaced, the upholstery has been renewed, the car repainted, and refinished from top to bottom, fully equipped with new antiskid tires, new inner tubes, side curtains, tools and—an artistic touch—the purchaser would also get, without extra charge, a "manual on care of car with full instructions on driving." To lend an air of verisimilitude to what might otherwise seem to be a bald and unconvincing tale, Mr. Maloney stated that his company was, as an advertising proposition, "going

to place twenty cars in that number of communities to which we can refer prospective customers." Their reason for picking out—or should we say "picking on"—doctors was that a "professional man knows and is known by more persons in his locality than any other citizen." The Anchor Manufacturing Company's stationery was somewhat imposing, being, in fact, a rather skilful imitation lithographed letter-head. The company gave as a reference the Chatham and Phenix National Bank of the City of New York, but insisted that all remittances be made payable to the Anchor Manufacturing Company. An Iowa physician, however, was wise; he decided to test out the proposition and sent his check for \$50 to the Chatham and Phenix National Bank, telling that institution to forward his letter, money and order to the concern if the company was responsible. In a short time the doctor got his check back with a statement by the Chatham and Phenix National Bank to this effect:

"The Anchor Manufacturing Company referred to us without permission and we have nothing on file to justify an opinion."

After receiving letters from several physicians, indicating that the scheme was being extensively worked, The Journal telegraphed its New York representative to look into the matter. He reports that, according to the renting office of the building in which the "Anchor Manufacturing Company" had desk room, Mr. Maloney had left somewhat hurriedly four days previously, just about an hour ahead of a call from the New York police department. Further, it seems that numerous telegrams and long distance messages have been coming in recently to the renting office of 51 East Forty-Second street, inquiring about the standing of the Anchor Manufacturing company, all

of which may indicate that a number of doctors are "out" a fifty dollar Liberty Bond or a check for that amount. To the shrewd business man the proposition made by the "Anchor Manufacturing Company" is preposterous on its face—but we members of the medical profession are not shrewd business men. Never has there been

a time in which the get-rich-quick promoters have been made active than to day. It behooves physicians to examine with more than ordinary care the proposals whereby they are offered returns out of all proportion to the investment required—*Journal A. M. A.* Sept. 6, 1919.

ORIGINAL ARTICLES

THE ETIOLOGY AND TREATMENT OF EPILEPSY

By J. E. Boone, Jr., M.D.

Assistant Physician State Hospital for the Insane, Columbia, S. C.

WHEN we study the Etiology of Epilepsy we are impressed with the fact that Epilepsy is a definite clinical entity; that under this name are included many symptom groups which differ widely as to their origin. Thus in a notable percentage of cases we meet with neuropathic family histories and in a smaller number a history of collateral or a direct heredity. Defective heredity being the most frequent predisposing cause—according to Spratling appearing in 87% of cases, while in over 15% Epilepsy existed in the parents.

All authorities agree that parental alcoholism is a prolific source of Epilepsy in the offspring and the inference is unavoidable that in a large number of Epileptics there has been a primary, a basic impairment of the germ plasm.

Concerning the evidence of the direct production of Epilepsy in the individual himself by intoxication and

infections the evidence is overwhelming. This is notably true of alcohol. Again, the convulsions which at times accompany or usher in the acute infectious diseases of childhood are to be regarded merely as a symptom of the infectious process and are to be explained by a direct toxic action on the brain cortex. Such convulsive seizures generally disappear with the infection, but unfortunately they now and then persist as established Epilepsy. It is probable that in such cases an encephalitis, perhaps limited in area, has occurred during the attacks of the infectious disease and that this has been followed by sclerotic changes, the latter being then sufficient to act as the starting point for Epileptic attacks. Many writers maintain that an organic change of some kind must be present in some region of the brain cortex. Thus malformations of the brain itself are often accompanied with Epilepsy and various stigmata of an Epileptic constitution are described. But more conclusive still is the well known fact that healthy persons who have no hereditary tendencies toward the disease, become Epileptic at various intervals after some injury to the skull. But this view overlooks the difference between primary and exciting causes. A primary cause remains

Prepared for the meeting of the South Carolina Medical Association, Florence, S. C., April 15th, 16th, 1919.

ever the same, but exciting causes vary indefinitely. Those lesions stand to the disease in the relation of exciting causes and nothing more. The primary cause, without which the exciting cause would not operate, may be outside the skull and should be dealt with first.

The periodicity of the seizures may possibly be explained by the apparent tendency in the nervous system to a periodical reaction to any continued irritation and if the research work done along this line could be corroborated it would seem probable that idiopathic Epilepsy is due to a toxic condition arising from faulty metabolism and that the immediate cause of the convulsions is the accumulation of deleterious substances in the blood or a faulty chemotaxis of the cortical cells. This theory receives further weight from the fact that the convulsions are frequently accompanied by symptoms which point to intoxication—as drowsiness, headache, nausea, etc. Epilepsy due to circumscribed lesions traumatic or otherwise of the brain can hardly be ascribed to toxicity alone. Even if we should base the known cerebral changes upon a chronic intoxication we would still have to explain the periodicity of the attacks, the accumulation of toxins and also the heredity relationship of Epilepsy.

Complete intermission is a feature of functional diseases of far reaching significance because it shows that the original seat of the malady is different from that of any affection due to a structural derangement.

Epilepsy stands in close relationship to a specific infection. It is well known that Epileptic convulsions are often the precursors of later developing severe organic brain syphilis and also which sometime occur as the first serious expression of general paresis. There is an Epilepsy which

cannot be distinguished from the idiopathic form in which a syphilitic infection is the only obtainable etiological factor. This may be due to the strengthening of a hereditary epileptic tendency by lues and the awakening of a latent epileptic predisposition through acquired syphilis. I have had the opportunity of observing three cases, all of these the history of infection was well established. There was no inherited tendency, no head injury, no history of the use of alcohol. There was no inter-current psychicanomalies—in all of them repeated treatment with mercury and pot. iod was without influence. Such cases may be regarded as the expression of a cerebral poisoning without any demonstrable lesion of the brain.

The germ theory of Epilepsy has been advocated by a few and much research work has been done along this line, but up to the present a definite relationship between bacteria and Epilepsy has not been determined.

This question about what thing is invariable, all important in the consideration of obscure problems in medicine because of the general principle that whatever is occasional is not essential. It is possible and very probable that many of the lesions found in the brain are the results of Epilepsy and not the causes. No matter how often or how prominently any given symptom or set of symptoms may occur in the course of a disease those symptoms cannot be essentially related to its primary cause if undoubted examples of the disease occur without them. This one fact, that the disease can exist without them at once reduces such occasional accessory relationship to the disease. In other words symptoms may vary, but real causes do not.

Treatment.

As far as the medical treatment of Epilepsy is concerned little can be done

except to attend to the bodily needs and combat any unfavorable symptoms which may arise. On the other hand moral treatment by which is meant suitable occupation or diversion, outdoor life, educational efforts to retard the progress of deterioration and conserve what mental equipment is left, is of the highest value and an absolute necessity.

It is here that I wish to condemn the excessive use of bromides because following repeated doses the patient becomes dull, stupid and indifferent, all mental processes and voluntary movements sluggish, memory defective, general tone less, loss of appetite, nausea, constipation and a general lowering of vitality and vigor. This is the state into which many Epileptics are brought by excessive use of bromides and I feel that it would be better to take some risk of convulsions rather than to bring a patient into such a hopeless condition of uselessness.

Innumerable remedies have been used to control or abort the seizures, their utility is somewhat doubtful.

Eliminative and supporting treatment is of the highest importance. Free and regular evacuations of bowels and bladder, promotion of normal skin action, proper clothing, frequent baths, diet should be regulated and easily digestible.

When Status Epilepticus occurs a lumbar puncture should be done and about 10 c. c. of spinal fluid drawn. If done early this will often abort a fatal issue. Morphine or hyosine are usually given. Rectal lavage and strict confinement to bed have given satisfactory results in some cases.

Treatment directed to the cause of Epilepsy is not promising if the disease has been of too long duration. Hence, head operations are usually contra-indicated. The time to operate for trauma, etc., is when the lesion

occurs or immediately thereafter.

The prevention of Epilepsy can only be secured by preventing marriages of the Epileptics, the insane, the defective and the alcoholics.

Finally in view of the liability to assaults and injuries to self or others any Epileptic should be under constant supervision at all times.

FRACTURES

By John Wallace, M.D., Easley, S. C.

HAVING been elected by my County Society, under protest, to read a paper on fractures before this scientific body, and having been on active service in the United States army for a period of twenty-six months, ending July 12th, 1919, the writer is forced to briefly review his experience with fractures as seen and treated chiefly in an Evacuation Hospital in France.

The main object of this paper is to impress upon those of you who did not have the great privilege of serving with the soldiers in the field, during the world war, a few important points, and especially with regard to the treatment of fractures by the use of very simple splints and appliances adopted and used so intelligently and effectively by the Medical Department.

The writer shall not attempt even to mention all of this apparatus, as time would not permit. Many of these splints and appliances could be used with satisfaction and to a great advantage by all civilian physicians who attempt to do fracture work, because of their simplicity.

Bone and joint injuries comprised a large proportion of the battle casualties, and fractures of the long bones

Read before the Fourth District Medical Society, Anderson, S. C., September 16, 1919.

and joints were more in evidence, therefore mention will be made of joints only in connection with fracture.

The femur was probably the most frequently involved bone, and the knee the most frequent joint.

Immediately after arrival in France, the writer was ordered to Base Hospital No. 9, at Chateaufort, for four days, where nothing but orthopedic cases were received and treated. Here a most wonderful and excellent opportunity was given to study the cases of severe fracture as they would come back from the front, and the treatment of these cases, which was most valuable to those of us who expected to go directly to the front, chiefly because of the errors of operation and splinting which were evident after transportation. One was most impressed with the care and treatment of fractures of the long bones and injuries to the knee joint especially. It was interesting to note that the same simple splints and appliances used at the front were used in the base hospitals, with comparatively little modification, addition and correction.

Many of the fractures seen were comminuted, or splinter fractures, and most of them compound, for during the last part of the war shrapnel balls, shell casings and hand grenades, also occasional rifle bullets at close range were quite in evidence, which caused ghastly wounds and fractures. Foreign bodies from the above, as well as pieces of clothing and skin being carried deeply into the wounds and consequent fragments of bone also acting as projectiles and tearing into the soft surrounding tissues. It might be added here that during the last few days of battle in the Argonne most of the wounds were from machine gun bullets.

Your time will not be occupied here

with all of the various types and classifications of these fractures. X-ray or fluoroscopic examinations, or both, were made of all cases, and of those to be operated one had some idea of what was to be done before hand. In many cases of so-called perforating fracture, i. e., where a bullet at long range would pass through the bone and entirely out through the other side, causing only a hole in the bone, and if the picture showed no foreign material, and the wound no signs of gas gangrene, these were not operated upon, but dressed, properly splinted and evacuated. In severe cases with shattered bones, great care was taken to remove all dead or damaged soft tissue, all foreign bodies, including pieces of bone, being well assured that no portion of bone was left which was not attached and well supplied with blood and some healthy surrounding tissues, as some secondary operations had to be done to remove this dead bone, acting as foreign bodies, thus furnishing a constant source of infection. Over conservatism was not found to be wise. The same principles apply to any other foreign body in an open wound. The pulse was always sought for distal to the wound. After thorough operation, or debridement as it was called, these wounds were cleansed with sterile ivory soap and water, with a little glycerine, or with Dakins Solution soaked in a gauze sponge. The wounds were filled thoroughly and gently, (but not packed) with sterile gauze, in order to allow some drainage and keep the wound well open from the bottom. The tight packing of wounds seemed to favor gas gangrene. The Carrell-Dakin method of treatment was used in the majority of these cases at the rear, or base hospitals.

Fractures involving joints and epiphyses were treated in a similar man-

ner, being especially careful never to leave a foreign body within the joint cavity. Free incisions were made in order to see what you were doing, in all cases of intra-articular compound fractures, many of which were communicated, the excision of all dead and severely injured tissues being done in one piece including damaged synovial membrane, where ever possible, much care being taken to ligate every single bleeding vessel, however small, within the joint, and the cavity gently cleansed of all blood clots, then the synovial membrane was closed with catgut suture always, except in cases which showed slight infection, when a gap was left in the line of suture for drainage, the rubber tubes were inserted down to, but not within, the joint cavity.

In cases of known and severer infection, the synovial membrane was pulled up and stitched to the skin for drainage, rather than insert drainage into the cavity. Great care was taken to preserve as much articular cartilage as possible, every particle of good cartilage being necessary for the future integrity of the joint movement. Im-mobility was always secured, of course, by splints before the patient left the operating table. The experience gained by the profession in the treatment of these cases during the war is undoubtedly of inestimable value.

Now we come to the splints and appliances adopted by the army and standardized by a board of efficient medical officers in the A. E. F. These splints properly applied constitute by far the most important part in the treatment of fractures. The simplicity of these splints and appliances, and the ease with which the average physician can apply them with comparatively good results, as well as comfort to the patient in practically all fractures as mentioned, makes the

subject well worth consideration, for there is little difference in the splinting of fractures in war and those of civil life. In mentioning a few of these splints and appliances, and in attempting to explain the mechanical principles and what is hoped to be attained, the writer has referred to, and gained much information from, *The Manual of Splints and Appliances for the use of the Medical Department of the United States Army*, 2nd edition, 1918, and is greatly indebted to the board of medical officers who standardized these splints and their application, namely:

Brig. Gen. J. M. T. Finney, M. C.

Col. Wm. L. Keller, M. C.

Lt. Col. Nathaniel Allison, M. C.

Lt. Col. Joseph A. Blanke, M. C.

Lt. Col. Joel E. Goldthwait, M. C.

Maj. Sidney R. Burnap, M. C.

It is needless to say that these men were on active service at various stations in the A. E. F.

The splints used in mobile and evacuation hospitals were few in number and the feature of interest is that each embodies one or both of the following principles, according to the requirements of the case. By splinting fractures we endeavor to obtain comfort for the patient and assistance in healing the lesion. The ends sought are accomplished by apparatus which causes the least discomfort to the patient by its application which produces no pressure upon sensitive parts, and which secures immobility for the injured part. These ends are secured by two mechanical principles, fixation and traction. Fixation to retain proper alignment after it has been secured, to favor union in fractured bones. In order to obtain satisfactory fixation the material used must always extend well above and below the lesion. This is a very important point. The fixation splints used in these hospitals were

the Snow Shoe Little, Long Liston Splint, Cabot Posterior Wire, Wrist, Hand and Wire Ladder Splinting and Board. In some exceptional instances Plaster of Paris casts and shells were used. Traction obtains muscular relaxation, diminishes pain and inhibits contraction of the muscles, thereby preventing malposition, secures proper alignment by a pull in the direction of normal anatomical lines, and prevents displacement of bone fragments, with consequent laceration of surrounding tissues. Traction splints were used wherever possible in fractures of all long bones, and injuries to the knee and elbow. The traction splints used chiefly in mobile and evacuation hospitals were the Hinged Traction Arm Splint, Thomas Traction Thigh and Leg Splint, Hinged Half Ring Thigh and Leg Splint. Traction was obtained mainly by means of adhesive plaster to the skin; the other ends being tied to the end of the splint, and further traction made by a small piece of wood or a nail placed between these ends and twisted. Care was taken not to constrict the limb.

All wounds can be easily dressed without interference with the splints or discomfort to the patient, as the limb is supported below by slings of cloth placed at intervals and firmly attached to the lateral bars of the splints by safety pins or clips. The position of the bone fragments can be controlled to a great extent by careful adjustment of these slings. The Wire Foot Support and Wire Splint Rest, which can be attached to the traction leg splints, are very valuable, especially during transportation of the patient. The foot support holds the foot at right angles to the leg. The splint rest holds the splint steady on the body and stretcher.

The writer suggests that physicians of rural communities get together and

purchase a set of these splints for at least each community, or county, and study the splints and their uses and application in the county societies. It is believed that great benefit will be derived by the physician and his patients from such action.

MY BODY—A MEANS

By John Schieber, M.D.

Commissioner of Health Thomas County,
Georgia.

LEST we forget, Sanitation and Hygiene once meant one and the same thing; that is both meant Hygiene. But as we realize that the environment in which we live is often a determining factor as whether we shall be well or sick, whether we shall live or die, we find it necessary to devise ways and means to bring about an environment which will not cause us to sicken, and to obtain such surroundings we must have Sanitarians and Sanitation, as well as Hygienist and Hygiene.

But we cannot get away from the fact that the diseases which we are trying to prevent find their origin in man; that they spread from man to man; and we are forever finding man the starter of all trouble, and the environment only an accessory before the fact in court parlance; the go-between, as I might call it, in the spread of disease.

As Sanitarians we must all see the need of mosquito control in the prevention of malaria, but we must implore and insist that the medical profession search more diligently for the fellow that carries the infecting plasmodium. And while we are waiting for funds to get a piece of drainage done, are we mindful enough of the importance of educating the public, as

Read before the Southeastern Sanitary Association, Rome, Ga., May 12, 1919.

well as the profession, that microscopic examination should never be omitted in the examination of a patient.

If I am clear of malaria I cannot infect the mosquito; more than that I cannot give malaria to my family, my friends and my neighbors. If I immunize myself against typhoid fever I not only escape the disease myself, but I again protect my family, my friends and my community, because my disease-free body does not spread disease.

Then if I cannot get a pure water supply; if I cannot get a safe sewage disposal system, I should work the harder to get my people to take the typhoid vaccine, and make more and more people immune to this disease, because these immunized people thus not only remain well themselves from this disease, but for this reason they also do not spread the disease to others, and people who take the vaccine thus raise the health rate and the sanitation of their environment.

Not all, nor even twenty-five per cent. of the population of our county have had anti-typhoid vaccine, yet typhoid has dropped from between three hundred and four hundred cases a year to twenty-five cases in 1917, and eighteen cases in 1918.

The eighteen cases we had in 1918 cannot possibly spread the disease that the three hundred and sixty cases did in earlier years, and here we see again that the important thing is that the healthy do not spread disease.

Thus these people who have kept themselves free from typhoid by immunizing themselves have been the means, not only of keeping well themselves, but of insuring us all a more healthful environment to live in.

The ranks of the Great White Plague is kept filled by the tubercular.

If I rise early in the morning, when the air is pure and sweet, and the dew

is on the ground; if I spend fifteen or twenty minutes in health promoting exercise; take twenty deep inhalations and as many forced exhalations flushing every nook and corner of my lungs with clean pure air; if I repeat this exercise three times in the day, and again when retiring, and sleep in a room with the windows open, then I may mingle with the tubercular with comparative safety; I may travel in the valley of no evil for the cougher and spitter will not harm me. I will not take sick, and more than this I will not make others sick; here again, a hygienic life, keeping physically fit, insures not only health to myself, but also insures a safer environment for those that that mingle with me, must live with me. Here again a hygienic life insures a sanitary environment.

Every time a hookworm case is cured we have removed a chief offender in the spread of this disease, and it is deplorable to see what a great number of children still go for years taking medicines for various minor ailments, when an undiscovered hookworm infection is the main trouble. If it is good hygiene to remove the dirt from under ones nails, it is good hygiene to remove a destructive parasite from the alimentary canal, and this results in good sanitation as well.

It is said that the American people drink, rub on, inject and smear on \$500,000,000 worth of drugs, and that four-fifths of this is self prescribed; just bought and used by people who know nothing about medicine, at least nothing worth knowing as to its therapeutic value.

The other one-fifth is prescribed by physicians, and I am satisfied that the doctor will admit that eight-tenths of this that they use is of very debatable usefulness as a curative agent.

It is further said that while we have made some wonderful advances in the

prevention of infectious diseases, we have permitted an increase of nearly 20 per cent. in the death rate of chronic diseases in the past ten years. Deaths due to Brights disease, arterio sclerosis, nervous diseases, dyspepsias, and so on, all due to faulty hygiene, and preventable by introducing a sensible regime into our daily lives; a regime that provides an intelligent use of air, exercise, a rational dietary, and a liberal use of water internally and externally.

It seems to me that we have not gone far enough on the way as yet, so that Sanitarians can afford to specialize entirely on environmental hygiene; that we should not forget that we lack a sufficient number of teachers of hygiene in our several districts, and we certainly should give a generous part of our time to pushing and aiding every movement that makes for better and better health for the individual.

We should especially work for physical education and insist that every school child in our district gets the benefit of a regular and definite amount of physical culture every day as part of the school curriculum. Let it be understood that if the school system does not include an expert teacher in this department of training, that the health officer should see that the child gets only such training as is really hygienic.

My office has adopted a set of set-up exercises for school children, and something like two thousand children in the rural schools have used these exercises the past few months; the children enjoy them immensely, and principals are reporting remarkable benefits, both physical and mental as the result of their use.

We are now working to get these exercises adopted into the curriculum of the rural schools of Thomas County,

and when we do something like six thousand children will soon show marked improvement in posture, movement and mentality. We have been using mostly the "Daily Dozen Set-up" as recommended by the Committee on Physical Reserve of the National Senility League.

We should be behind every movement, aye, we should be the promoters of all attempts to provide more out-of-door recreation for men, women and children, urging especially for all these the hygienic, exhilarating and joy inspiring game of volley ball.

All women should be encouraged to play volley ball, and certainly all business men should get out and play volley ball evenings after closing the office.

My office is now teaching volley ball to the girls in the high schools, grammar schools and the Camp Fire Girls are promising us that they will help towards getting their parents to play volley ball also.

Let us remember that sanitation is for man; that a healthful body and an extended life is the end we seek, and that a sound and healthful body does not spread disease, and hence, is in itself a means towards the maintenance of a better environmental hygiene; a better sanitation if you please.

ANAPHYLACTIC MANIFESTATION OF FOODS IN CHILDREN

By
D. L. Smith, M. D., Spartanburg, S. C.

THIS subject has commanded a great deal of attention of research workers in the past few years and much interest is being manifested in the outcome of its study. As the manifestations are more pronounced

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ed in children than in the adult, the bulk of the work done is by the various pediatricians of the country and the journals on pediatrics have been carrying articles on this subject.

We used to term these manifestations idiosyncracies and felt that that was the end of it, but, with the use of the protein, we are able to definitely determine the particular protein that is causing the reaction and perfect a cure as the result of it.

Theobald Smith was the first, in 1904, to describe the phenomena of anaphylactic shock, and it has since been termed "Theobald Smith Phenomena." His work was done however, in reference to diphtheria anti-toxin for horse serum. The various research laboratories have their special men who are carrying on experiments with the proteins. At present, prominent among them might be mentioned I. Chandler Walker, Harvard University, Baker, of the Children's Department, and Dr. Talbott of the Massachusetts General Hospital. In 1908 Anderson and Rosenau suggested that certain cases of food idiosyncrasies were due to a previous sensitization of the individual, in a manner unknown, to certain food proteins, they regarded this as a manifestation of anaphylaxis.

These various phenomena manifest themselves in the form of eczema, asthma or various nervous conditions. The various food protein or allegermia, as called by some men, are put on the market by several drug houses at present. The test is made in the following manner: Bare the forearms and wash the inner surface where the application is to be made. There are several ways of testing a patient in order to determine whether or not he may be sensitive to the protein. One commonly used is known as the cutaneous test. A number of small cuts not deep enough to draw blood although to pen-

etrate the skin are made on the flexor surface of the forearm. They are best made with a dull pointed needle. On each cut is placed a protein and to it is added a drop of tenth normal sodium hydroxide solution to dissolve the protein and to permit of its rapid absorption. At the end of twenty minutes to half hour the reaction is noticed. In some cases a positive reaction will appear in a few minutes after the application. The positive reaction consists of a raised point, elevation or urticarial wheal surrounding the cut. The smallest reaction that we pronounce positive must measure five-tenths CM. in diameter and any smaller reactions are called doubtful. Negative skin tests with proteins rule out those proteins positively as a cause of trouble in the individual. There is no systematic effect following the application of this diagnostic test, when properly employed.

In the series of cases studied by White there were twenty-four cases of moist, oozing, crusting eczema. Four patients gave entirely negative tests and in six the controls were positive. Fourteen patients reacted positively to fat-free milk; nine to egg albumin; thirteen to salt-free butter, and six to lactose or to oatmeal water. There were twenty-four cases of red, infiltrated, dry and scaling eczema. Five patients gave entirely negative tests and in nine the controls were positive. Sixteen patients reacted positively to fat-free milk; twelve to egg albumin; sixteen to salt-free butter, and seven to lactose or to oatmeal water. There were three cases of papular eczema. None gave entirely negative tests and in two the controls were positive. Two patients reacted positively to fat-free milk; three to egg albumin; two to salt-free butter, and two to lactose or to oatmeal water. There were two cases of lichenoid eczema. One pati-

ent gave entirely negative tests and the other reacted positively to fat-free milk. There were two patients in whom the only symptom was an infiltrated, leathery skin. One of these individuals gave entirely negative tests and the other reacted positively to fat-free milk, to egg albumin and to salt-free butter. There was one patient who exhibited merely excoriations due to intense pruritus. This individual reacted positively to egg albumin and to salt-free butter and one of the controls was also positive.

From these facts and from other investigations, not detailed White makes the following deductions on the question of food in its relations to chronic eczema at various stages of life. Eczematous infants usually present in their stools an excess of fat or of starch. An excess of the former element generally means a moist eczema, of the latter, a dry type. When eczema is present and neither fat nor starch appears in the excessive amounts in the feces, look for susceptibility to egg albumin or to milk, or in default of all these more common causes, to a diminished thyroid secretion.

Each food produces fairly constant skin lesions. (a) Urticaria occurs more frequently than erythemata; fish, tomatoes and cheese only producing urticaria, while cereals and pork produce erythemata in a considerable proportion of cases. (b) Tomatoes and cereals usually produce these lesions within an hour after ingestion. (c) The eruptions usually persist less than twenty-four hours. (d) The peculiar reaction of ingestion of eggs, cereals and pork are inherited in a considerable percentage of cases. (e) The skin manifestations in more than one-half of their cases of sensibility to egg ingestion were accompanied by cough and dyspnea. Most but apparently not all, urticarias and erythe-

mata following ingestion of these proteids are due to phenomena similar to those observed in an anaphylaxis. The etiologic factors are summarized by McBride and Schorer as follows:

A. Sensitization or true anaphylaxis to (1) foods as such, (2) foods as changed by parasites, (3) food as changed during disease. B. Consumption of partially decomposed or spoiled foods. C. Simple idiosyncrasy. To determine the particular food causing the manifestations, feeding and injection tests are of the greatest importance. Parasites and other causes of disease must be looked for.

Nursing babies which usually suffer with eczema, the moist variety show free fat in great quantities in the stools and the only way to cure them is to get rid of the fat indigestion. I have many of these cases and until I realized the cause found them most difficult to cure. Now it is a very simple matter and it is done without use of drugs, simply ascertain if it is due to the baby not being able to digest the normal amount of fat or if the mother's milk contains too high a percentage of fats and treat the conditions found.

Walker has a splendid report of his results with asthma and while it is not confined to children his series of four hundred cases over one hundred were under the five year limit. The younger the subject the higher the percentage of reaction to the proteins. Under two years 30 cases were tested and 83% reacted to some protein. Two to five of 30 cases 90% reacted. Five to 10, 37 cases 40% reacted.

Sensitization to the protein in White's series were far more frequent in those that began to have asthma in infancy. Of nine patients who began to have asthma between the age of two and five, two showed a reaction to egg and five to the cereal proteins. Of six

that were sensitive to food proteins, 35 to the cereal grains. Of these, 35, 25 showed to wheat alone, three to corn, two to rice and the remaining five to many of the various cereals. Among the remaining 33 food cases 13 were sensitive to egg, five to caseine eight to fish, seven to potato. Multiple sensitization is frequent and much more so in infancy than in the older patients of White's series.

A positive skin test with several different proteins may mean that all of them are causing asthma or that only some of them at present and that the others have been or may in the future. Suffice it to say that a positive reaction which seems to have no bearing on the case should be a danger signal and not as a false reaction, such positive tests should not be disregarded.

Case 1.—E. S. age four years, second child, breast fed up to 12th month and mixed fed since it came to me in June, 1917, with a history of convulsive seizures at night. Examination and history were negative as to specific disease. Father died of T. B., VonPirquet negative, X-ray of chest showed lungs negative and no enlargement of Thy-mus or other glands. I had the opportunity to see many of these attacks which I determined were not true epilepsy but of a spasmophilic. I tested him with the proteins of the foods he was taking and he showed a marked reaction to milk, beef and oatmeal. We discontinued the use of these and he had no attacks for a month when I determined to prove my results so, with mother's consent, I gave him some beef broth and that night he had an attack. After a few days we tried him on milk with same results.

He has not had a return of these convulsions since and by gradual addition of small quantities of these foods

he is now able to take limited amounts of them without bad effects.

Case 2.—E. G. age two years. Normal birth. Breast fed up to 12th month then indiscriminately fed. Large healthy child well developed and normal in every respect.

Admitted to the Baby Hospital Saluda, N. C., August 3, 1918. She had moist eczema on the back of her neck extending from the hair line to the tips of shoulders. Various salves had been used for three weeks without results. I tested her with the proteins and she showed a marked reaction to Irish potato and beef. Stools showed no free fats or fatty acids. We put her on a diet excluding the beef and potatoes and without any other treatment she improved rapidly and was discharged at the end of two weeks with all skin lesions gone.

Case 3.—Age six years. Normal in every respect except for a rusting eczema of face of four months duration which had resisted all treatment of the various salves. Skin test with proteins showed marked reaction to eggs and wheat. We excluded these and she improved rapidly, mother phoning me at the end of two weeks that rash had entirely disappeared. Five months later I was called to see her again with the same trouble and the mother reported that while she was sick with the flu the child had been allowed to eat the forbidden things. I again put her on the same diet and the rash has disappeared.

I see numbers of cases every year that come to me following summer diarrhea that have been on egg albumin that are in serious condition due to the anaphylactic reaction of the egg. The temperature, and the rashes clear up almost like magic when the albumin is withdrawn and the food regulated. All of these babies have an upset later if put on egg. I have only

tried three with the skin test and they showed marked reaction.

I have several cases of asthma that I have worked out to report at this time, but the length of this paper will not permit me to intrude upon your valuable time longer.

Conclusions.

The skin test with the proteins, while not always absolutely reliable, I believe will be developed in the next few years. It should be used in all cases of eczema, asthma or other food idiosyncrasies

F. Luat was able to demonstrate permeability in older children egg albumin and beef proteins and could confirm his results by demonstrating precipitines in the blood and by other immunological test. Frizo found similar positive proof in the infants with cows milk idiosyncrasies. He could demonstrate preeipitines and complement fixing bodies in the blood during the period of active disturbance.

Lusk reports a case of aggravated aryngospasm spasms which was due to cows milk, which cleared up upon withdrawal of cows milk.

SOCIETY REPORTS

SUMTER—TRIBUTE TO DR. CHEYNE

A committee appointed by the President of the Sumter County Medical Society to draft resolutions relative to the death of their late associate, Dr. Walter Cheyne, met and drafted the following resolutions:

Whereas God in his divine wisdom removed from our midst our friend and associate, therefore be it resolved:

First: That in the death of Dr. Walter Cheyne, the Sumter County Medical Society has lost an enthusiastic, active and energetic member.

Second: In his death there will be a distinct loss felt by his co-laborers, his

patients, whom he faithfully and efficiently served, and the public at large.

Third: That the sympathy of the members of the Sumter County Medical Society be extended to his bereaved family, and that a copy of these resolutions be sent to them and published in the Daily Item and in the Journal of the South Carolina Medical Association.

Fourth: That these resolutions be inscribed on a page of our minute book, together with date of his birth and death.

H. L. SHAW,
H. M. STUCKEY,
ARCHIE CHINA.

August 20, 1919.

A B S T R A C T S

POSTINFLUENZAL PSYCHOSES

E. W. Fell, Cincinnati (Journal A. M., June 7, 1919) reports on the cases of mental disorder associated with or following influenza and treated at the Walter Reed General Hospital. Out of 2,500 cases of influenza treated, there were twenty cases selected as meeting the conditions required for a diagnosis of mental disease. Only four of these developed during the influenza attack psychoses of a severe type, which outlasted the acute disease. These twenty cases of postinfluenzal psychoses fall fairly clearly into three groups: (1) manic-depressive, 8; (2) infective psychosis, 7; (3) dementia praecox, 5 cases. This classification overlaps as regards the groups, and may be considered as a series, grading from simple depression to hebephrenic praecox of the depressed type, the chief characteristic of the series being a foundation of depression on which developed sense falsification, confusion and schizophrenic symptoms. Predisposition, as shown in family or personal history, was only marked in the manic-depressive type of cases. The dementia praecox cases did not necessarily become permanent, but their prognosis as to recovery was less favorable. Hallucinations were entirely absent in seven cases. The most common symptoms were mental depression. Fell does not include in these cases those which occurred with more than a month of normality between the end of the influenzal attack and the first appearance of mental disorder. Nor does he include definite organic psychoses coming to attention but not clearly the effects of the influenza. In

cases occurring later than a month there would be great doubt as to the etiologic significance of the influenza.

TRANSFUSION

Edward Lindeman, New York (Journal A. M. A., June 7, 1919, reports 214 consecutive blood transfusions without a chill performed by him with the syringe-cannula method, devised by him and described in 1913 (American Journal of Diseases of Children, July, 1913, to which he refers. He re-describes at length the method with all its improvements, and claims the following advantages: "The blood passes through a minimum amount of foreign material. There is no blind system into which air may leak, and there are no rubber tubings, stop-cocks or valves around which blood may clot. No anticoagulants and no foreign material are introduced into the patient." Formerly a little salt solution was injected but has been found unnecessary. The essential factors for successful transfusion, as given by Lindeman, are: 1. The method must be applicable to any case and any disease. 2. It must be possible to transfuse a sufficient amount to meet the indications. 3. The blood must be transfused in its natural state. 4. This method calls for a minimum of foreign material through which the blood must pass. 5. It must pass from the donor to the patient in the least possible length of time. 6. Reactions must be absent. At least four cases for reaction are possible: (1) hemolysis and agglutination; (2) toxic substances developed in the blood outside the body; (3) chemicals such as anticoagulants and

sodium solution, and (4) sensitization and anaphylaxis. In the author's first 150 transfusions, 33 per cent. were followed by chills and fever. The previous hemolytic tests were rather crude, and he set himself to finding means of avoiding these reactions. In the 146 transfusions following, only nine per cent. were followed by chills, and this improvement was followed by a later series of 214 cases without a chill. This series omits transfusion of less than 1,000 c.c., and tables are given showing the results in pernicious anemia and other conditions. The posttransfusion temperature is often somewhat higher, when amounts above 1,400 c.c. are given. During the period of fever, which sometimes follows 24 hours after and may last for two or three days, the patients will frequently suffer from slight malaise and lack of appetite; at other times, exhilaration, restlessness and insomnia occur. When the temperature reaches normal the full benefit of the transfusion is felt as a rule. Transitory urticaria sometimes appears but is apparently of little consequence. In four cases bronchospasms occurred after the first transfusion, but have not occurred in later ones with the same cases. Of his series 108 were for pernicious anemia, and in some cases 15 to 20 transfusions were made. A posttransfusion rise of temperature occurred in 18.5 per cent. of all cases, in 12 per cent. of 26 cases hemorrhage cases, and 12.5 per cent. of 80 miscellaneous cases. Lindeman does not favor the use of citrated blood, and believes that it increases the liability to reactions. In cases requiring repeated transfusions, the need of a perfect method is greater, to avoid disturbance of the labile elements of the blood and sensitization to subsequent transfusion. He thinks it would be well for a person advising transfusion to think of all the possibilities, and

advises that one with experience be called on to perform the operation. When one uses transfusion only occasionally, the less he does of it the better. It is a life-saving measure in the hands of the skilled, and it is especially in diseases other than hemorrhage that work of the best character is of paramount importance.

URETER AND RENAL PELVIS

W. F. Braasch, Rochester, Minn., (Journal A. M. A., Sept. 6, 1919), devoted his chairman's address before the Section on Urology mainly to a discussion of the dilation of the ureter and the renal pelvis. The mechanical obstructions were first noted, but greater space was given to the inflammatory dilatations. He finds that dilatation of the ureter and the renal pelvis may occur without mechanical causes, and the difference between the mechanical and the inflammatory dilatations, in their anatomy and pathology, and in the clinical signs, are quite definite. The clinical demonstration of such conditions may be of much diagnostic value. Cases have been described of what is called atonic dilatation, due to paralysis of the bladder from nervous disease; or occurring in some cases without known cause. Congenital constriction is so rare as to be almost negligible and probably the cases described as such are often due to an acquired mechanical obstruction. The details of the condition are fully given and the article is illustrated.

SYNTHETIC DRUGS

P. N. Leech, W. Rabak, and A. H. Clark, Chicago (Journal A. M. A., Sept. 6, 1919), report the examination of American-made synthetic drugs. Owing to the war, the United States has become independent of Germany so

far as a number of important synthetic remedies are concerned. New official names have been given to several of these, license for the manufacture of which has been granted by the Federal Trade Commission . . . "arsphenamin (contracted from the scientific name arsenophenolamin) for salvarsan, arsenobenzol, diarsenol, arsaminol; barbital (contracted from the scientific name diethyl-barbituric acid) for veronal; barbitel-sodium (the sodium salt of barbital) for 'veronal-sodium' and 'medinal'; cinchophen for atophan or phenyleinchoninic acid (the U. S. P. IX name); procain for novocain hydrochlorid (from 'pro' and '(co)cain'), and procain nitrate for novocain nitrate." Chemical tests were made to insure a high standard of purity without hardships to the manufacturer, a standard equal to or better than that of the German made product. These were carried out in the laboratory of the A. M. A., and the essential features of this work are reported in the article. The conclusion from these examinations so far are summarized as follows: "1. American chemists are producing synthetic drugs formerly controlled by Germany, and thus have declared their independence of German chemicals. 2. Judging from the evidence at hand, we can feel assured that the quality of American synthetics will be second to none."

DRUG IDIOSYNCRASY

R. A. Cooke, New York (Journal A. M. A., Sept. 6, 1919), calls attention to some of the peculiar drug reactions, and refers to his former paper on the allergic action of drugs, contributed by him in connection with Vander Veer, in which they estimated that approximately 10 per cent. of all persons manifest some form of hypersensitivity. The confusion between allergy

and anaphylaxis as forms of hypersensitivity is explained as follows by Cooke: Anaphylaxis is an antigen anti-body reaction, artificially induced by immunologic processes. Allergy is a term used to express the natural hypersensitivity of the individual not produced by immunologic processes, as the exciting agent or allergens are in many cases not capable of producing antibodies. The pollen-produced fevers are such reactions. "In experiments carried on with Coca and Flood we could not demonstrate antibody in the individual during an attack or injection of pollen extract by passive transfer, nor could antibody be produced in the guinea-pig itself. In other words, the extract is nonantigenic. Other substances, such as glue and certain drugs like acetylsalicylic acid, to which individuals react peculiarly, are also nonantigenic. To be sure, many of the substances to which the human being does show clinical hypersensitivity are capable of forming antibodies. Hence, the confusion between the natural hypersensitivity or allergy and the artificial or anaphylaxis." One proof of the allergic nature of abnormal drug reaction is the fact that they are inherited. Of fifteen cases, noticed in this paper, positive antecedents of hypersensitivity existed in twelve, and in the other three there were evidences of other forms of allergy, such as asthma, hay fever or urticaria. Cooke describes the symptoms of drug reaction, as observed by him, more especially of the acetylsalicylic acid reaction, which has been most frequent. In nine of the fifteen cases, violent bronchial asthma was induced, lasting from eight to thirty-six hours, and, in one instance, three weeks. In one case urticaria appeared. No attempt is made to give a complete summary of the subject, but only to emphasize the fact that such a condition exists. Cooke

offers the following tentative classification of drug reactions in concluding his paper: "1. Normal action — side action and toxic action. 2. Idiosyncratic action (a) exaggerated normal action; (b) exaggerated side action; (c) lessened normal action (tolerance). 3. Allergic action—abnormal action."

FILARIAL PERIODICITY

K. M. Lynch, Charleston, S. C., (Journal A. M. A., Sept. 6, 1919) takes up the phenomenon of the disappearance during certain portions of the day of filaria in the blood, as in the case of *F. bancrofti*, which disappears during the hours of sleep, and *F. loa*, during the hours of activity. Until Smith and Rivas developed the acetic acid concentration method of counting the number of microfilariae in a given amount of blood, "filarial periodicity" signified the periodic appearance and disappearance of these organisms in the peripheral blood. Smith and Rivas have been able to show, by the acid concentration method of counting, that filaria embryos are to be found in the peripheral blood at all times of the day and night, and that the periodicity is a matter of the relative number thus circulating, and have been led to form a new theory in explaining the phenomenon. They found that the period of greatest prevalence of *F. Bancrofti* is from midnight to 8 a. m., while the period of cutaneous prevalence of *F. loa* is from 8 a. m. to 4 p. h., the maximum being about noon. Regarding these periods as those respectively of (a) greatest peripheral relaxation from a condition of fatigue, in sound sleep, (b) of recovery from fatigue and resumption of peripheral capillary tone, and (c) of capillary constriction from the combined influences of tone and of compression from muscular activities,

and believing that both filariae are restricted in their motility by their ensheathment, Smith and Rivas advance a theory in which the mechanics of the capillary circulation plays the main part. In brief, the theory is that each kind of parasite is in smallest numbers when it has the easiest progress through the relaxed capillaries, because there are therefore less of them found in the same quantity of blood. Supporting this mechanical theory they have performed experiments aiming at altering circulatory conditions and capillary caliber. Lynch has also experimented on two species of filaria, using nitroglycerin as a dilator and epinephrin and pituitary extracts to constrict the capillary circulation. Experiments during sleep were also made. His conclusions are given substantially as follows: The administration of nitroglycerin is followed by a decrease in the number of filariae during both periods of prevalence and of paucity, while epinephrin or pituitary extract has the reverse effect. In a collapsed lung, with which experiments were also conducted, the *F. immitis* accumulated in enormous numbers, and its period of cutaneous prevalence was directly connected with sleep. The venous drainage of a part contains fewer filariae than the capillaries; there are still fewer when accumulation in the capillaries is produced by vascular stimulation, and following this capillary accumulation the venous drainage contains larger numbers.

DIAGNOSTIC INCISION OF TUMORS

While it is generally accepted that there is need of an early diagnosis to obtain satisfactory treatment of cancers, the diagnosis is often very difficult in tumor cases, and there is a prejudice against exercising fragments

for inspection, as F. C. Wood, New York (Journal A. M. A., Sept. 6, 1919), points out. In a moderate number of cases this prejudice is justified by the effects of such incisions in hastening the progress and the spread of malignant disease. The whole question, he says, has been well discussed by Ewing, who thinks biopsy justified if necessary for the diagnosis. It is undeniable that most cases of cancer, calling for operation are so far advanced that a good pathologist will not make a diagnostic mistake. Wood, however, has seen operations done for lesions which had been wrongly diagnosed. There is still a tendency, too, to treat ulcerative lesions of the mouth too long without operation, especially if the patient gives a positive Wasserman reaction. On the other hand, the claim that exploratory incision into a tumor is invariably followed by spreading or metastasis to regional lymph nodes is not correct. Wood has never acceded to the view that the opening of blood vessels is extremely risky, because the blood flow tends to wash particles out of the cut vessels into other parts, as the blood flow tends to wash them out from the vessels. The effect, moreover, of opening the lymph channels, he says, has not been studied scientifically, and he holds that the massage or manipulation, alone of the tumor, is a very dangerous procedure. This seems to him a good subject for experimentation. In an experiment that he conducted, he used rat tumors that usually metastasize, such as the Flexner-Johling carcinoma and the Crocker-Fund-Rat-Sarcoma No. 10. There were 384 animals tested in the latter group. In the first named group the percentage of metastases after probatory excision was 22.2, while in those without this incision it was 21.8, and in still another group, in which the disease was allowed to

progress to a more advanced stage, the percentage of metastases was 32.2. On a similar experiment with the Crocker-Fund-Rat-Sarcoma No. 10, no increased metastasis followed incision. He concludes that the human tumors are probably not widely spread by incision, and he holds that when they are so situated as to call for a mutilating or dangerous operation an incision is justifiable if required for diagnosis. It is preferable that such diagnosis be made at once, before operating, if possible, by frozen section, so that if necessary the tumor can be operated on directly under the same anesthesia.

... TRANSILLUMINATION ...

A. G. Bettman, Portland, Ore. (Journal A. M. A., Sept. 6, 1919), suggests the use of transillumination as an aid in locating and removing foreign bodies in the tissues. Any body that will cast a shadow can be located, he says, in a surprisingly short time. Having cut down to the supposed location of the foreign body and arranged the light, the operator looks through a tube at the tissues, which may be held up or otherwise manipulated. A dark room is unnecessary. The foreign substance once located, it is easy to remove. The tube may be of any suitable material and, in an emergency, a roll of paper may be used. The angle at which it is used can be varied to meet conditions, and even deeply embedded material can frequently be located without the necessity of inserting the tube into the wound.

ADHESIVE PLASTER

A. L. Soresi, New York (Journal A. M. A., Sept. 6, 1919), recommends the use of the common rubber cement used for patching rubber tires, diluted about ten times in ether, for painting

the area of skin on which adhesive plasters must be applied for traction and similar purposes. There is difficulty in making plasters adhere in many cases because of soaking from the secretions of the wounds, etc., or because of inflamed skin. The addition of the rubber solution renders the plaster very much more adhesive, and in cases in which there is much secretion, he paints the outside of the plaster with the same solution.

TYPHOID CARRIERS

Referring to Circular 69, issued by the Chief Surgeon of the American Expeditionary Forces, in February, 1919, giving evidence of an increase of typhoid and paratyphoid fever among the overseas troops, E. H. Schorer ((Kansas City), Hoboken, N. J., (Journal A. M. A., Sept. 6, 1919), presents a report of examinations of returning soldiers made to determine how many chronic carriers there might be among them. The methods used are described, and the laboratory seems to have been especially adapted for the search, as an intensive survey for intestinal parasites was already being conducted there by Major Kofoid. Of all the strains from the stools of 1,000 men, including members of practically all divisions isolated at the same time to reduce the percentage error, only two gave sufficiently definite reactions to warrant their identification as true pathogens. One culture proved to be *Bacillus dysenteriae* of the Hiss-Russel-Y type, while the other was *B. dysenteriae* of the Flexner type. Neither of the men had been suffering from bacillary dysentery. In addition to the two strains mentioned, twenty-eight strains of nonlactose fermenters were isolated which gave carbohydrate fermentations, characteristic of the types sought, but which agglutinated

with their respective serums in dilution of 1:100, and, at most, at 1:500. "Since the serums used were of high titer (*B. typhosus* serum 1:32,000 *B. paratyphosus* A and B serums 1:16,000, and *B. dysenteriae*, serum 1:4,000) and because repeated subcultivating on agar failed to increase the agglutinability of these strains, these organisms were finally classed as intermediates. Eleven other strains, which on preliminary tests fermented only glucose and mannite with gas, and agglutinated with the paratyphoid serums in dilutions of 1:100 and 1:500, later fermented lactose after prolonged incubation. These were undoubtedly slow colons. Their detection emphasizes the necessity of long incubation (two weeks) of the lactose serum water and litmus milk cultures, and also of carrying out agglutination tests in higher dilutions, before making any final bacteriologic diagnosis." If time had permitted the use of cultures on brilliant green agar, more isolations might have been made, no doubt. The method used was deemed sufficient in a great majority of cases, and the results showed that the infections in the American Expeditionary Forces during the autumn and early winter of 1918 had remained limited and had given rise to no aftermath of carriers.

GUNSHOT FRACTURES

J. A. Blake, New York (Journal A. M. A., Sept. 6, 1919) describes the characteristics of fractures due to gunshot wounds, according to the nature of the projectile and the bone involved. It was found that operation to prevent or eliminate infection was not indicated in wounds caused by rifle balls, when the wounds of entrance and exit were punctate, but was indicated in all fractures caused by shell or grenade fragments. (With shrapnel-

ball wounds it was indicated only if good technic was possible. Consensus of opinion was that the operation should be limited to that necessary to prevent contamination and remove actually detached fragments. Primary and delayed suture of the accompanying wounded soft parts could be carried out by a good surgeon under favorable conditions when continued observation was possible. With infection present or anticipated, free dependent drainage was imperative. As regards transport of fractures, he says nothing more than that traction is absolutely necessary, and that the Thomas leg and arm splints are the most efficient for the purpose. In regard to the treatment until consolidation and return of function, that of suspension and traction by proper weights and pulleys is most satisfactory. The principles of treatment are given based on the fact that in every fracture of a long bone the proximal fragment tends to occupy a certain position, determined by the muscles attached, which may be called its place of election or rest. This tendency is readily modified up to certain limits by external force. Traction of the distal fragment prevents overriding and shortening and harmful angulation, while proper suspension permits a certain amount of movement in bed without disturbing the bone. A little amount of motion between the fragments does not delay union, but seems to aid it. With traction and suspension properly applied, it is possible to move all joints of the leg during the treatment. The general rules are to avoid actual fixation, to employ traction to the greatest possible extent for overcoming deformity, and to afford the greatest freedom of movement. The chief and underlying principle is conservation of function. In no case of arm and leg fracture are circular bandages em-

ployed, but some modifications must be used in fractures of the femur. In many fractures of the lower third of the femur, the axis of traction must be lower than the axis of the proximal fragment, and support be given below the distal fragment. When possible, in all thigh bone fractures, skeletal traction, preferably with Ransohoff's tongs, is made directly on the lower fragment, and in some cases of fracture of the lower third, the tongs may be used to lift the distal fragment into position by elevating the axis of traction. Some other points are mentioned in detail, and while it is impossible to make a statistical comparison of end-results because of the short stay of patients during convalescence, the results at the end of the war, as far as gunshot fractures are concerned, were beyond comparison with those obtained at the beginning. The treatment is also shown as possessing like advantages in the small number of similar civilian cases.

WAR FRACTURES

While, during the war, a vast number of fractures have been treated by various methods, the advantages of a standard method are indisputable, according to J. B. Walker, New York (*Journal A. M. A.*, Sept. 6, 1919). Many surgeons cling to discredited methods, and Walker hoped to present evidence that would convince them of their error. The need for improvement is shown by the fact that among the men examined for the last draft there were found 23,338 suffering from malunion of fractures. The statistics, in hospital records, do not show the desired results from treatment, and it is to be hoped that the war department will take measures to render its valuable records available. Many hospitals suffered from lack of equipment, and

fifteen specially equipped hospitals, with a qualified personnel, were designated as those to which all patients in cases of fracture of the long bones should be transferred. It was not permitted that this arrangement should apply to patients already under treatment, and only such fresh patients as arrived from overseas were thus transferred, while the request for the transfer of patients in peripheral nerve cases to eleven designated special hospitals was approved. Osteomyelitis has been the most serious complication of fractures and has occurred in at least 50 per cent. of the cases. The statistics of such cases treated are given, and it is believed that the figures will be increased by further data. It is too early to give end-results, but it may be useful to record some general impressions gained. For the transporting of the patient from the field, the Thomas or Blake-Keller modification is unquestionably the best type of splint, and during the period of infection of a lower extremity, the Thomas or Hodgens splint, with the Balkan frame and extension by suspension and traction, has given the best results. During 1917-1918, there has been a great increase in the use of the caliper. For humerus and elbow fractures, the Thomas arm splint, with the Balkan frame and sufficient extension, has been most satisfactory. In a large majority of hospitals, measurements have been neglected. Tape measures are as essential as thermometers. Too few roentgenograms have been taken regularly, and bad end-results are often due to neglect in carrying out recognized methods. Young, able, alert surgeons with good hospital experience will have splendid future opportunities in this work.

BONE FISTULAS

P. Chutro, Buenos Aires (Journal A. M. A., Sept. 6, 1919, objects to the term osteomyelitis as applied to the suppuration of bone after war wounds, a name which he would reserve for the definite disease occurring in civil practice. He would designate the war complications as bone fistula, a definite condition with characteristics different from true osteomyelitis. The bone fistula, he says, is due to insufficient treatment of wounds, and is a limited osteitis which readily becomes chronic. The two factors dominating it are the presence of a cavity with rigid walls, and the infection of this cavity. Certain peculiarities of these cavities, which communicate with the exterior of the body, are the fungus growths, instead of healthy granulations, which characterize them, underneath and between which it is easy to probe denuded bone. In some cases, the little sequestra of bone are eliminated, and after months or years the fungosities sclerose, and a cure of variable duration occurs. The infection, he holds, is very superficial, and the bacteriology is very rich, showing all the anaerobic and aerobic organisms of such wounds. The infection phenomena are not so prominent as the cavity has little ability to retain its contents, and the lymphatics around the focus are blocked. But a slight disturbance or an awkward dressing breaks up this blockade, and septic products are absorbed. The treatment varies, according to the bone involved. The incision must be properly placed, and the walls of the cavity cleanly resected. The cicatrization of the bone is by granulation from the depths to the periphery. The surface of the bone must remain sterile for several weeks to provide time for this cicatrization. The Carrel-Dakin treatment finds its place

here. Tibial wounds are the most accessible to the sight and so have enabled Chutro to study the cicatrization. When there is a clot adherent to the bone, the Carrel-Dakin fluid fails to penetrate, but begins to act when this becomes detached. When the bony surface is covered with granulations, the secondary closure of the wound may be done, but this is likely to leave an adherent scar, and Chutro prefers to keep up the irrigation until complete healing occurs. He has obtained, on the whole, very satisfactory results in these cases, even after many previous operations had failed.

MOUNTING SPECIMENS IN GELATIN

Kelley Hale, Wilmington, Ohio, (*Journal A. M. A.*, Sept. 6, 1919), recommends the mounting of the smaller anatomic and pathologic specimens in gelatin, between two plates of glass separated from each other by strips of glass fastened by volatilized Canada balsam. This method has an advantage over the use of larger containers for small specimens, and gives better visibility. The specimens can be filed away then like lantern slides.

MOSQUITO CONTROL

New Jersey's work in mosquito control is described by W. E. Darnall, Atlantic City, N. J. (*Journal A. M. A.*, Sept. 6, 1919). New Jersey has had an unenviable notoriety because of its mosquitoes, but conditions are no worse there than in other seaboard states bordered by extensive salt marshes. The pioneer in the scientific study of mosquito control was the late Dr. John B. Smith, State Entomologist whose work caused the most perfect organization against the pest, anywhere in the world. Darnall describes

the success of the work in the neighborhood of Camp Merritt, an embarkation camp to which the government was enabled to send millions of soldiers without the development of a single case of malaria. Of the forty different species of mosquitoes in New Jersey, practically the only ones of economic importance are the house mosquito and the malarial anopheles group. The real problem is to rid the state of *Aedes sollicitans* which at times makes life miserable for nearly half the population by reason of its long flights from the seacoast. About 16,000,000 feet of 10 by 30 in. ditching (about one-third of it in the County of Atlantic) have been cut in the salt marshes, of which there are about 296,000 acres in the State—about one-half the work that needs to be done. In the next five years the rest of the marsh lands will be drained, and then New Jersey will be able to say that the mosquito pest is conquered. The per capita cost to the population protected, thus far, is about 15 cents. After the work is done the maintenance of it is of supreme importance, and the annual cost of this has been estimated as averaging about thirty-five cents per acre. The organization of the county units for this purpose is described. With intelligent cooperation and intensive study of the subject to meet the engineering problems, the drainage in many communities, it is thought, can be done with comparatively small expenditure. The article is illustrated.

WAR FRACTURES

Some lessons of the war from the treatment of fractures are set forth by E. W. H. Grove, Bristol, England ((*Journal A. M. A.*, Sept. 6, 1919). He says no ingenuity of invention or improvement in operation can compare in importance with the three principles

of segregation, continuity and team work as regards their good influence in both our knowledge of, and good results in, the treatment of broken bones. This is evident in the retrospect of the war, and it will also surely be evident in the future work of practice. If cases of bad fracture were segregated in certain wards, while the less severe cases were treated in an attached out-patient department, and the whole until placed under one chief with a proper team, a real advance might be made, and opportunities for valuable research and needed education would be afforded. The securing of later proper functioning of the part should be the objective in all cases. The importance of treating the muscles and joints must be kept always in mind. The education and mental treatment are also essential, and the keynote, here, must be simplicity and common sense. The splint treatment and the modern method of extension are described in some detail as regards their essential principles. The author describes a method of his own in the use of his wire eradle splint for leg fractures, as follows: "The leg, in a position of semiflexion of hip and knee, is slung to the erade by flannel and rubber bandages, the latter being placed opposite the wounds. Counterextension from the sound groin secures full adduction of the wounded leg. Extension of the fracture is by means of a transfixion pin driven through the lower end of the femur or the upper end of the tibia. The only weight used is a 5 or 10 pound iron weight, which can be multiplied two, three or fourfold by means of pulley blocks attached to the transfixion pin and to the uprights which form a part of the lower end of the splint. The patient is nursed on a three part 'biscuit' mattress, the center section of which is replaced by an air cushion. For this may

be substituted the bed pan or a sand-bag under the sound buttock for dressing of a high wound. The lower end of the splint is hooked or tied to the lower bar of the bed." Groves has used transfixion methods for many years, and has seen a troublesome sepsis in some cases, which he lays off the seton action of the pin. The paper contains many more details of interest, too fully stated to be abstracted. Non-union, he thinks, is usually due to imperfect contact of the fragments, which is often overlooked at the time when it could be corrected. The use of bone grafts is also described, in its mechanical and operative details, and the importance of the periosteum is emphasized. In conclusion, Groves says that one should bear in mind that advance in the treatment of fractures should be looked for on the lines of specialized teamwork. "... fracture repair involves mechanical as well as physiologic principles, and whether it is in the education of the surgeon, the design or application of a splint, or the cutting and fitting of a bone graft, mechanics and surgery must go together, so that correct and efficient mechanism is always a part of surgical technique." The article is illustrated.

DERMATOLOGY

O. H. Foerster, Milwaukee (Journal A. M. A., Aug. 30, 1919, says that as compared with the voluminous literature concerned with the eutaneous expression of disease, that dealing with affections of the mucous membrane is disproportionately small, though the subject warrants greater consideration than has been given it. The occurrence of papules and vesicular and exudative processes in the mucosa in connection with various diseases is often noticed, but those of special interest to the dermatologist, aside from syphilis,

are the lesions of the mucous membrane, associated with disorders classified as typically cutaneous. Among this group are lichen planus, erythema multiforme, dermatitis herpetiformis, the three varieties of pemphigus, erythematous lupus, lupus vulgaris, herpes and impetigo herpetiformis, mostly dermatoses of constitutional origin. The involvement of the mucous membranes is of regular occurrence in many of these conditions and may proceed to cutaneous symptoms or, more rarely, constitute the only manifestation of the disease. Foerster reviews at length the symptomatology of lichen planus, which is one of the most accurately studied affections of the mucous membranes, and is of comparatively frequent occurrence. The essential lesion is a papule, convex, conical or flattened, hard, whitish gray, and of pin-head size or smaller. These lesions are discrete and scattered or arranged in groups or lines, and are without an inflammatory halo. Foerster quotes Liederthal's description as accurate and concise. In addition to its appearance in the oral cavity, lichen planus appears also sometimes on the vaginal and urethral mucosa, and not infrequently on the glans penis. Foerster has observed that lichen planus of the skin, with itching, is very often diagnosed as itch by the practitioner, and advises examination of the mouth in these cases. Lupus erythematosus may also be limited to the mucous membranes entirely, which is rare, or for a time preceding its appearance on the skin or scalp. Its recognition under these circumstances is difficult and dependent on the stage of the process. In the early stages, recognition may be almost impossible, as the affection begins with a bluish-red, slightly elevated spot indefinitely outlined on the oral mucosa, with sometimes slight erosion. Within a few days, however,

the margins become elevated and distinct in outline, and delicate, vascular striations are observed, converging toward the center of the lesion, which is now depressed and eroded. Later it increases in depth, loses its inflammatory character and enters on the stage of atrophy and quiescence. Its resemblance to syphilis is like that of lichen planus and sometimes may cause confusion. Other dermatoses in the mouth are not so likely to have this mistake made concerning them, though erythema multiformis and pemphigus may also suggest the mucous patches of syphilis. Foerster gives points of diagnostic differentiation, such as the polycyclic outlines and collarette of epithelial shreds, and the facts that the lesions are usually painful and bleed readily, are always superficial and not infiltrated, and are always inflammatory in their borders. Urticaria, angioneurotic edema and purpura often involve the mucous membranes of the nose, mouth and alimentary tract. Drugs may cause erosive lesions; and acanthosis nigricans, made known by Politzer, affects the lips and mouth with considerable regularity. Several other constitutional diseases, like scurvy, pellagra, acute leukemia and pernicious anemia, often affect the mucous membranes, as well as tuberculosis, syphilis, etc. Three conditions to which Foerster directs attention are. First, "geographic tongue," regarding which some confusion seems to exist; this he has observed most often in adults and very rarely in children. Second, Meeller's glossitis, the description of which by Harris is quoted. Third, Vincent's disease, which he thinks will probably become an important factor in the differential diagnosis of mucosal disease with the return of soldiers from Europe. The spirilla of Vincent are known as the causative agents and are readily seen in dark

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field preparations. The possibility of
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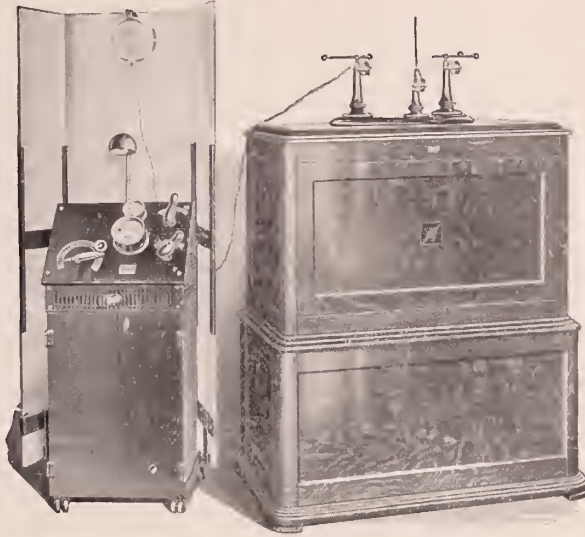
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The Journal OF THE South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

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PUBLIC HEALTH.

J. LaBRUCE WARD, M. D., Columbia, S. C.

EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

DEATH OF DR. J. P. DUCKETT

The death of Dr. J. P. Duckett, of Anderson, removes one of the prominent members of the South Carolina Medical Association, a gentleman of the old school type of family physician. We copy from the Greenville News the following:

Anderson, Oct. 10.—(Special.)—Dr. James Perry Duckett, one of the oldest and best known physicians of Anderson, died at the Anderson Hospital this morning at 11:15, after an illness of about three weeks. One year this month, the deceased suffered an attack of influenza from which he never fully recovered.

Dr. Duckett was born in Newberry county in 1851, being the son of Joseph and Nancy Duckett. When a young man he attended Furman University

in Greenville, later going to Jefferson Medical College in Philadelphia. He graduated in the year 1874 and returned to Newberry to take up his practice. He was married to Miss Eugenia Watson in 1877 and soon afterwards moved to Anderson, where he soon became one of the leading physicians and a prominent citizen. He was for a number of years a member of city council. He also served as a member of the Board of Health and was instrumental in having the milk and meat inspection ordinance passed. For a long time he was a member of the board of trustees of the Anderson schools and only resigned two years ago. While he was a student at Furman University he joined the Baptist church and upon moving to Anderson he transferred his membership to the First Baptist church, of which he was an active

member of the board of deacons at the time of his death. Dr. Duckett was one of the most prominent Masons in the State and for eighteen years has been the senior grand deacon of the grand lodge of South Carolina.

Dr. Duckett is survived by his wife, one daughter, Miss Oliva, a teacher in the graded schools of Anderson, and one son, James Boyce Duckett, of Newberry county. He is also survived by one brother, Wm. L. Duckett, of Newberry county.

Funeral services will be held Sunday afternoon at 4 o'clock, with the Masons officiating.

"WHAT WE KNOW ABOUT CANCER"

A Handbook Published by the American Society for the Control of Cancer for Distribution Among Physicians and Surgeons.

The Society announces the publication, through the Council on Health and Public Instruction of the American Medical Association, of a new handbook for practitioners, entitled "What We Know About Cancer." This is a 54-page pamphlet which gives in condensed summary form the essence of the best modern knowledge concerning the diagnosis and treatment of the principal forms of malignant disease. The preparation of this handbook has resulted from the conviction of the leaders in the campaign of cancer education that all practitioners of medicine should share to the fullest possible extent the knowledge and standards of practice in the discovery and treatment of this disease which have been developed in the leading clinical and research centers of the country.

Having in mind this need of a more general dissemination of the knowl-

edge of cancer within the medical profession, the American Society for the Control of Cancer in February, 1917, appointed a special committee to prepare the manuscript of a handbook on cancer for distribution among practitioners. This committee consisted of Dr. Robert B. Greenough, Director of the Harvard Cancer Commission, Boston, Massachusetts; Dr. James Ewing, Professor of Pathology at Cornell University Medical College, and Director of Cancer Research at the Memorial Hospital, New York City; and Dr. J. M. Wainwright, of Scranton, Pennsylvania, for many years chairman of the Cancer Commission of the Pennsylvania State Medical Association. The manuscript prepared by this committee was submitted to the Council of the Society in April, 1917, and then sent to a number of prominent surgeons and other students of cancer for critical review. The suggestions thus obtained were utilized in a careful revision of the manuscript which after a delay naturally ensuing from the war, was again submitted to the Council of the Society at a meeting held October 26th, 1918. At this time the Council thoroughly reviewed the draft and ordered its publication. The handbook therefore represents not merely the views of the authors of the draft, but the consensus of opinion of a considerably larger number of representative American physicians and surgeons who have had special experience in dealing with this disease.

The handbook attempts to provide in a brief compendium the essential facts about cancer in general and its manifestations in the different situations where it most commonly occurs. The drafting committee after careful consideration decided to omit any critical and controversial review of published statistics showing the end results of operative treatment, and has

presented only in general terms the expectation of success attending the radical operative treatment of cancer in its different situations. In this, as in other respects, the handbook endeavors to take a conservative view of the subject and it is believed that the majority of statements made will be accepted by the surgeons of the country generally. So far as the pamphlet represents such a consensus of opinion, it is believed that, as thus published for widespread and inexpensive distribution, it will be welcomed by thousands of physicians and surgeons and students throughout the United States.

The State representatives and other directors and members of the Society are urged to use their influence in every possible way to secure the widespread use which this standard pamphlet merits. As with many of the health educational pamphlets published by the American Medical Association, reprints may be obtained by State Medical Associations, State Boards of Health, etc., in special editions with any cover design that may be desired. This arrangement will be made without extra charge for any organization ordering 1,000 copies or more. It is further hoped that members of the Society will endeavor to have appropriate state and local agencies, particularly their State Boards of Health, assume the expense of reprinting and distributing this handbook among the physicians of the State. It is suggested also that it be utilized in medical schools in connection with the instruction on the subject of cancer.

The pamphlet may be ordered either from the American Medical Association, 535 North Dearborn St., Chicago, or from the American Society for the Control of Cancer, 25 West 45th Street, New York City. The price of ten cents a single copy has been set merely to cover the cost of printing and postage.

Larger orders will be filled at the following rates:

5 copies	\$.50
25 copies	2.25
50 copies	4.00
100 copies	8.00
200 copies	14.00
500 copies	30.00
1,000 copies	55.00

MEETING OF THE SOUTHERN MEDICAL ASSOCIATION AT ASHEVILLE, NOV. 10-13.

The entire profession of South Carolina will be interested in the great meeting of the Southern Medical Association scheduled so near to the members of the profession in this State and doubtless very many will take advantage of the opportunity to attend. The management calls attention to the fact that reduced rates will be available on all railroads and the attractions this year promise to be of a high order. We urge, therefore, every member of the South Carolina Medical Association who can possibly do so, to plan to attend this meeting. The Southern Medical Association is now the second largest association in America and has had a deservedly phenomenal growth.

COVINGTON LEE

The name of Covington Lee has appeared in the daily papers recently as having been arrested on the charge of murder in connection with the death of one of his patients. He was released on bond for \$5,000.00, the warrant for his arrest according to the account in the papers followed a verdict of the coroner's jury charging him with criminal negligence, and holding him responsible for his patient's death. It will be remembered that Dr. Covington Lee had been in the toils of the

courts for practicing medicine without a license and that the case was brought to the attention of the House of Delegates at the Florence meeting; and that the House of Delegates approved of an effort to secure an injunction to stop him from practicing medicine in this State. Attorney-General Wolfe took the matter up promptly, and the following correspondence may be of some interest to the profession in connection with the case:

Columbia, S. C.,
June 4th, 1919.

Dr. E. A. Hines, Secretary, South Carolina Medical Association, Seneca, S. C.

Dear Dr. Hines:

In Re: South Carolina Medical Association vs. Covington Lee.

I am herewith enclosing to you copy of my letter of even date to Mr. John D. Gilland, attorney at law, Florence, S. C., who I had associated in this case, for the reason of his being on the ground and better able to work up the necessary evidence, which letter explains itself.

Very truly,

Signed: Sam'l M. Wolfe.
Attorney-General.
Columbia, S. C.,
June 4, 1919.

Mr. John D. Gilland, Attorney at Law,
Florence, S. C.

Dear Sir:

In Re: Covington Lee.

I advise that since writing to you under date of May 23rd, I have taken occasion to further investigate the feature suggested in my letter of that date, namely, the question of a Court of Equity entertaining our motion for injunctive relief and I am now convinced under the authority of the case of the State against Blackwell, cited in Vol. X, of the South Carolina Supreme Court Reports, page 35, and various other cases since that decision

that it would be useless for us to put further time or work on the case so far as this plan of procedure is concerned. Moreover, I am just in receipt of papers sent me by Messrs. Whiting and Baker, attorneys, of Florence, S. C., who represented the defendant, Covington Lee, in former proceedings, of which I was not aware. I see from Judge Shipp's order refusing to grant an injunction and dissolving his temporary restraining order, that he takes this position, which I think is amply sustained under the law.

Our only redress, as I see it, is to bide our time, and endeavor once more to obtain a more serious consideration of the case by the Grand Jury of your county, and in this event it is probable that we can get a change of venue. If necessary, it may be that I can arrange to appear before the grand jury in this connection.

Very truly,
Signed: Sam'l M. Wolfe.
Attorney-General.

THIRD SURVEY OF HOSPITALS

The third survey of hospitals being made under the auspices of the American Medical Association is now well under way. Through an extensive correspondence and a third questionnaire the Association has collected a mass of information on the subject. Much of this material has been tabulated and forwarded to committees in each state representing the State Medical Associations. Most of the state committees have arranged definite lines of action and by inspection of the hospitals or by other methods are securing first-hand information by which the data collected by the Association is being carefully checked. The immediate end sought is to provide a reliable list of hospitals which are in position to furnish a satisfactory intern

training. [The investigation is not limited to intern hospitals, however, but will cover all institutions and the data obtained will be useful in any future action which may be taken in classifying hospitals. The work in South Carolina is in charge of a committee as follows: Dr. Edgar A. Hines, Secretary, South Carolina Medical As-

sociation, Seneca; Dr. James Rogers Young, Anderson, and Dr. John La Bruce Ward, Columbia. The closer relationship which the hospital now bears to the public in the community which it serves makes it all the more important that the service rendered by it shall be excellent in character.

ORIGINAL ARTICLES

THE USE OF DAKIN'S SOLUTION IN THE TREATMENT OF COMPOUND FRACTURES

By W. H. Powe, M.D., Greenville, S. C.

IN writing this paper I thought it well to make it as brief as possible and at the same time to include in it a few of the more important points we must keep in mind in the successful use of Dakin's Solution. This solution is well out of the experimental stage and is with us to stay, but like all new things it is having to make a fight for proper recognition by all members of the profession. It has to be used with a fair amount of attention to detail, and the object of this paper is to call your attention to the necessity for care in its use and to make a plea for giving it a fair trial.

The greatest obstacle in the successful treatment of compound fractures has always been the presence of infecting organisms. If the wound could only be kept sterile the process of repair would be greatly hastened. In Dakin's Solution we have a weapon with which to combat infection, which

if properly used in conjunction with good surgical knowledge and technique, will certainly render our compound fracture wounds sterile. To secure this happy result however, there are a few essential conditions that must obtain.

1. The first of these is good surgery. In 1917 it was my privilege to spend a few weeks at Rockefeller Institute during the time that Dr. Carrell was there instructing medical officers in his method of using Dakin's Solution, and the very first remark I heard him make was to the effect that this method of treatment was not supposed to render good surgery unnecessary. The use of this antiseptic is futile unless the wound is first rendered mechanically clean. Before beginning the use of the solution all detached fragments of bone, bits of clothing, etc., must be removed for if they remain as foci of infection the wound will not become sterile. Drainage must be provided for, and the wound opened sufficiently for the antiseptic to be introduced into all parts of the wound. Good surgery is the first essential.

2. The next thing necessary is to be sure that we are using Dakin's Solution and not something else. It is considerably worse than useless to use a solution that only resembles Dakin's.

Read before the Fourth District Medical Association, Anderson, S. C., September 16, 1919.

It must be Dakin's. If the fluid contains less than .45% of Chlorine it is not germicidal and will do no good. If it is stronger than .50% Chlorine it is a chemical irritant that will prevent healing on account of its destructive effects on the cells of the body. This was one of the points first stressed by Dr. Carrell, but how often have we heard Dakin's Solution roundly condemned by a man who dissolved somebody's tablets in so much water and of course failed to get results? Some months ago I visited a hospital and the surgeon took me down to see a patient he was treating—he said—with Dakin's Solution. He was not getting any improvement at all. I asked him to let me see his solution. He produced a bottle and naively remarked that he would soon have to get another bottle. He had been using out of that one for over two weeks. This solution was so full of free chlorine that it was extremely irritating when brought near the nose yet no doubt that doctor is still telling people as he did me that "Dakin's Solution is not worth a——." He does not know for he has not used Dakin's at all. If we are to get a sterile wound we must use freshly prepared Dakin's and not some wretched imitation.

3. As already stated we must employ good surgery, and we must use real Dakin's Solution. There is a third requirement. It must be used as Dr. Carrell uses it. The technique is easy but it must be adhered to to get the beautiful results he obtains. I shall not attempt to go into this phase of the subject. What we aim to accomplish is to maintain the constant presence of Dakin's Solution in all parts

of the wound until it becomes sterile. Dr. Carrell has explained the method he found most practicable. By the use of the various wire splints it is easy to arrange the dressings so that the wound can be inspected and irrigated without removing the splints.

Where Dakin's Solution has been faithfully tried it has been satisfactory. As Dr. Carrell has said, "if you do not get good results do not blame the method, blame yourself, for if properly used it will give the best of results." As early as January, 1918, the office of the Surgeon General of the army in speaking of the treatment of compound fractures advised medical officers "When the wound is extensive and the bone badly shattered, one of the best methods of treatment is the Carrell-Dakin—many of the worst cases of fracture of the femur have been treated very successfully during the past year." In the same pamphlet they advised its use in infected knee joints. It has been said that this method of treatment is impractical because of the number of nurses required and the expense. Very little more attention is required by it than by other methods and when the shortened course of the disability is considered we see that it is really cheaper.

In conclusion let me reiterate. The use of good surgical judgment and technique, combined with the use of a freshly prepared Dakin's Solution, which is of correct Chlorine strength and alkalinity, and a strict adherence to Dr. Carrell's technique will give you a sterile wound in an astonishingly short time.

TREATMENT OF FRACTURES— LONG BONES.

By L. C. Sanders, M.D., Anderson, S. C.

THE function of the bony structure being so vital to body locomotion, it is very necessary to treat injuries to these structures with the object in view of overcoming deformities and restoring the part to its normal state.

In order to do this it is necessary to bear in mind the kind of fracture and the extent of injury.

There are two great kinds of fracture to be considered, namely, Simple and Compound.

Injury to a bone of whatever variety means a destruction of tissues and the breaking down of the lines of communication between the separate ends of the bones. It means that neighboring uninjured nerves and blood vessels must do extra duty in order to meet the emergency. Therefore collateral circulation is established by the nearby vessels and every vascular element rushes fresh supplies to the point of injury.

The sudden severing of the blood channels necessarily means a leakage of blood and lymph, producing a swelling of the parts and consequent pain, due to pressure.

It can readily be seen that with the sudden accident to living tissues producing local vascular changes, there is also a disturbance in the general circulation. Therefore the natural consequence is shock.

In a simple fracture the destruction is not very great and the shock is mild, but in a compound fracture where the soft structures are lacerated, there is

a more complex and serious phenomena.

Shock in a compound fracture is frequently present, because more body fluid escapes, more soft tissue is injured and the adjacent blood vessels have a heavy duty in handling the surplus supplies sent by nature to repair the damage.

In the treatment proper of fractures there are two main forces to combat, the treatment of shock, and the bringing together and holding in apposition the injured bone. In a compound fracture there is the additional hemorrhage and prevention of infection.

In shock there are three things to combat: namely, pain, cold and loss of blood. Three practical methods are available to meet these conditions: proper splinting, heat and surgical dressings.

If the patient is properly splinted heated by proper blanketing, hot drinks, and hemorrhages controlled by surgical dressings, much of the shock will be reduced and the patient's comfort greatly enhanced.

The importance of heat in compound fractures cannot be too greatly emphasized. The patient should be put in bed, snugly covered and additional covering be placed around the injured member.

The chief object in the treatment of bone and joint injuries by means of splints and other appliances are:

1. Comfort to the patient.
2. Assistance in the healing of the lesion.

The ends sought are gained by splints or appliances which:

1. Cause the least possible disturbance to the patient in their application and which can be applied quickly.
2. Which do not produce pressure upon sensitive parts.
3. Allow free motion to other parts

of the body while injured part remains immobile.

All these end points can be secured by the fulfillment of two practical principals:

1. Fixation.

2. Traction.

Fixation is necessary in that it—

(a) Gives rest to injured part.

(b) Assures earliest possible union.

(c) Keeps parts in proper position after alignment.

Traction is essential in all fractures of long bones because it—

(a) Gives muscular relaxation, diminishes pain and prevents malposition.

(b) It gives security of proper alignment by pulling in normal lines.

(c) Prevents displacement of bony fragments and consequent laceration of nerves, muscles and vascular tissues.

Fixation cannot be made and properly kept unless the splinting material used extends well above and below the point of injury and properly held in place.

A great deal of pain, malposition and general discomfort to the patient is caused by improper fixation material and crude cotton and gauze pads which tend to displace the injured part, thereby frustrating the main object of fixation.

Traction is important in that it inhibits muscular contraction, prevents jamming of broken ends of the bone, malposition, and adds greatly to the comfort of the patient. It must not be too great however or it will pull the broken ends too far apart allowing the soft structures to come between, producing non-union or faulty union.

In broaching the subject of splinting material, it is rather difficult to choose from the large variety in use, the ones which are the most practical and efficient.

The qualities of the splint are dependent as much upon the efficiency of

the applicator as upon the adequacy of the splint.

No splint is satisfactory unless the operator has mastered the essentials of Fixation and Traction and applies his splints to meet these requirements. The treatment of fractures requires as much skill, technique and care as does any other phase of surgical practice.

There are a few splints which every one can keep in his office ready for emergency use and which will meet with practically all the requirements of injuries to long bones.

In fractures of bones of the upper extremity, the following splints are quite satisfactory:

(1) Hinged traction Thomas arm splint—used in:

(a) Injuries to shoulder joints.

(b) Injuries to shaft of humerus.

(c) Injuries to elbow joint.

(d) Injuries to forearm.

This splint has a padded ring which fits around the shoulder, connected to the steel rods which extend well below the end of the extended fingers. The arm is put up in extension and fixed to the side.

(2) Jones humerus traction splint used in:

(a) Injuries to shaft of humerus in which traction is desired and flexion of the elbow necessary.

(b) Injuries to elbow joint.

(c) Injuries to forearm.

This splint is braced from the shoulder and offers the advantage of traction facilities in fracture to humerus and in case of destructive elbow joint injuries.

(3) Jones cock-up or crab wrist splint used in:

(a) Colles fractures.

(b) In fractures of wrist joint.

(c) As a support in case of wrist drop after injury to musculospiral nerve.

This splint is made of steel and has

a proper angle to the wrist, besides giving the fingers mobility.

(4) Walker-Calle splint—made in all sizes and offers the same features as the Jones-Crab splint, but being made of paper, it is not so stable.

Lower Extremity Splints.

It is necessary to have the advantage of traction in practically all fractures of lower extremity, so the following splints meet the requirements:

(1) Thomas half or full ring traction leg splint, used in:

- (a) Injuries to shaft of femur.
- (b) Injuries to knee joints.
- (c) Injuries to leg.

A padded ring fits around the thigh at the groins, fixing the steel bars which extend six inches beyond the sole of the foot. This splint does not touch the leg, but is held in position by broad transverse straps upon which the injured member rests. Traction from below is maintained by fastening the adhesive strips to the lower leg and anchoring them to the lower end of the splint. This can be regulated by a Spanish windlass.

When properly applied, the patient can move every part of his body, except the injured member, which remains immobile.

(2) Long Lister Splint with interrupting bridge.

Used in fractures of pelvis and hip joint. This splint extends from axilla to sole of foot and has foot rest. It is held in position by thoracic and leg bandage and is especially adapted for use where immobility to hip joint is desired.

(3) Anterior thigh and leg splint, (Hodgen type). Used in injuries to thigh and leg when suspension is desired.

This is particularly adapted to cases where a slight flexion to leg is necessary and in compound fractures where

the external opening is on posterior surface of leg.

There is one other type of splint which can be used anywhere, the wire ladder splint. It can be moulded to fit the shoulder, elbow joint in flexion, for side splint, for coaptation splints and various other places, where light flexible material is desired.

These few splints, seven in number will meet all the requirements of fixation and traction in practically all injuries to long bones of the extremities and one or two of each kind can easily be kept in readiness for emergency and can be used over and over again.

They are not very expensive and certainly offer great advantage over the ordinary board splints which cannot possibly meet the requirements of fixation.

Before taking up the treatment of complicated fractures, there are a few things which should be mentioned in connection with the first treatment of fractures:

First—Don't handle an injured bone unnecessarily. If it's a simple fracture get the part in apposition quickly, apply splints rapidly and leave it alone. The more the bruised tissues are handled, the more pain and shock is produced and the more damage is done to the already injured soft structures.

Second—If there is a great deal of swelling and it is impossible to determine whether or not the parts are in apposition put the limb up in extension, apply traction and allow it to rest for a few days before trying to set it. A fracture does not have to be reduced and put up permanently the first time, a few days later is just as good, provided traction is maintained and to prevent pain and fixation to give rest.

Third—The use of X-ray should be routine in all fracture cases. A picture

should be taken before the permanent setting to determine the kind of fracture. Just after the setting to ascertain if it is in proper apposition, and at intervals of ten days to determine if the proper alignment has been maintained.

This procedure offers two advantages, it guarantees the successful alignment to the bone and relieves the mind of the physician, of unnecessary anxiety.

In taking up the complications of fractures, there are three main conditions which may arise and which must be treated. They are:

Septic infection.

Non-union.

Faulty or vicious union.

Infection is to be considered in all compound fractures, but in a large number of cases where the injury is due to a blow upon the exterior or to a fall, the infection does not occur. Cases where infections result, the infection travels from the exterior inward.

In compound injuries produced by a missile carries with it particles of clothing and other foreign substances.

The seriousness of infection is determined by two factors: First—by the extent of muscular destruction, and secondly, by the existence of anatomical conditions which produce a pocketing of the infective material.

There are several conditions which infection produces, the most important being:

Septicemia.

Osteomyelitis.

Gas gangrene.

Osteomyelitis is the most common, because the medullary canal is the first substance to become infected, and this is the seat of the trouble. So many cases of chronic infections with their resultant destruction of bone, finds

origin in the exposed medullary canal of a compound fracture.

Therefore compound fractures produced by a missile carrying with it into the inner tissues, the infective substances, should be treated the same as abdominal wounds and should be as quickly operated upon.

The operation required is not a mere matter of drainage, but a question of preparing the wound for early healing.

It is essential therefore to remove any foreign bodies in the wound, scraps of clothing and tissue destroyed by injury. Everything contused or lacerated should be thoroughly exposed. The operation should be done under general anesthetic, medullary canal well exposed and cleaned. X-ray picture should be before the operator in order to guide him in locating any foreign body which may have lodged in the soft structures.

If these injuries are treated in this way, the resultant chronic osteomyelitis, so commonly seen and which cause such wide destruction of bone and muscular tissues, consequent deformities and possibly loss of limb, will be practically eliminated.

This operation is for prophylaxis and when properly carried out, will in the majority of cases secure healing without infection.

In cases where the infection is present when seen, the operation is the same, the difference being in dealing with an active infection. Therefore more care should be used in making complete excision of all infected tissues and thorough exposure producing the best possible drainage.

The post-operative treatment of infected compound fractures has been completely revolutionized during the past three years.

It consists in the employment of certain chemical solutions to continuously bathe the open wounds thereby

destroying the infective organisms, producing a sterile wound.

The solution most successfully employed are, the famous Dakin solution, by the Carrel method, and Dichloramin-T.

With these solutions properly employed, thousands of lives have been saved, limbs restored to usefulness and much suffering eliminated.

The other two complications, non-union and faulty union will be mentioned briefly.

They are with a few exceptions due to faulty technique in putting up fractures, bad apposition, improper alignment, incorrect fixation and too heavy traction.

The exceptions are due to certain chronic systemic diseases which lower the recuperative power of bone tissues. Syphilis is the principal disease with this inhibiting faculty.

In regard to the after treatment of all classes of fractures where union has taken place, gentle massage and passive movements increased daily, seems to be very beneficial in restoring the normal physiological functions of the limbs. This is especially important in injuries to joints and to long bones near the joints.

The wonderful construction work done by the surgeons during the past few years has given us an abundance of new ideas and methods of treatment. They are practical too, and can be used in every day work.

It is hoped that the few points brought out in this paper will be a stimulus to a broad discussion and an eagerness to increased study of the more modern methods of treating bone injuries.

PYELITIS

By T. M. Davis, M.D., Greenville, S. C.

I Wish to briefly discuss before you today a condition that is possibly as often overlooked and which can be as definitely ascertained as any pathological condition I can recall at present and that is inflammation of the Kidney Pelvis or Pyelitis.

There are several paths through any of which organisms may invade this site, namely, Hematogenous, Lymphogenous, Ascending or Urogenous and by direct extension. Many organisms are eliminated through the kidneys without causing any pathological changes, but when there is any change from the normal these organisms often do become pathogenic, this is the Hematogenous route often follows the infectious diseases, Tonsillar Abscess, Typhoid, periodontal abscesses, etc.

The Colon is connected with the perirenal lymphatics especially is this demonstrated on the right side, this is the cause of the right side being more often affected and the Lymphogenous path.

The Ascending or Urogenous route of invasion is still under discussion as to the exact nature of the ascension, many investigators namely Braasch, Draper, Caulk and others contend that there is high intravascular tension over a long period of time, or that, there must be some incompetence of the ureteral orifice, Cabot, Crabtree, Stewart, Sweet and others contend that the infections ascend by way of the lymphatics along the ureter as it has been shown that there is a connection between the kidney and bladder lymphatics. I think that under certain modifying conditions all of the above theories deserve recognition, and that we have invasion along all the routes.

Infection occurs in the renal pelvis otherwise normal, but one already the site of disease, malposition of the kidney, abnormal development of the ureter is more susceptible. Individual constitutional disorders and any debilitating condition renders one more susceptible. More direct predisposing causes are, ureteral strictures, kinks of the ureter, ureteral calculous, Cystitis, vesical calculous, enlarged prostate, urethral structures urethritis, conditions outside of the urological tract namely, uterine fibroids, ovarian cysts, pregnant uterus and any abdominal growth that presses on the ureters interfering with their lumen.

The organisms most commonly found are the colon bacilli and staphylococcus, and less commonly the streptococcus, pseudodiphtheria, *Gonococcus bacillus pyocyaneus* and others still more rarely. By far the commonest organism found is the colon bacillus, which appears in from 50 to 90% of all cases, while the staphylococcus comes second and is found in 10 to 20% of all cases, these two organisms occurring together in not a small number of infections.

Pathology: In simple catarrhal pyelitis the mucous membrane is swollen, velvety, reddened and covered with abundant secretion which contains varying amounts of pus corpuscles and epithelium, in severer forms punctate hemorrhages occur also little grey nodules corresponding to the lymph nodules, there is seldom any ulceration except in cases where calculi are present these ulcers are due primarily to the erosion of pressure due to its presence. In the suppurative pyelitis the pelvis may contain free pus; it becomes as a rule dilated by this purulent material, the swelling of the mucous membrane encroaches on the calibre of the uretero-pelvic junction and sometimes complete obliteration thereof.

In membranous or fibrinous pyelitis the pelvis is coated with diphtheritic membrane, composed of pus cells, epithelia and bacteria, the mucosa showing ulceration and gangrene, this is found more often with calculous.

The ureter varies in its degree of involvement, it may in some cases show no changes at all, or it may be dilated and hypertrophied ranging from its normal size to size of the finger, at times the mucosa is coated with a sandy deposit and the ureter becomes thickened and maybe valve-like formations also strictures be formed.

The right kidney is more often the side infected probably due to the greater mobility increasing hyperaemia, ureteral obstruction, and also the direct connection with the colon by lymphatics. About one third of the cases have bilateral infections.

Symptomatology.—In typical cases the symptoms are logically associated with renal infection, there are other patients however, whose symptoms are altogether atypical and misleading, and infection often goes on and on until severe destruction of the kidney has taken place, again many patients are subjected to unnecessary surgical operations on a wrong diagnosis, the acute cases associated with fevers rarely cause any symptoms even when the process is extensive.

In mild grades there is pain in the back, with tenderness in the loin associated with malaise, and slight fever, more often the process is more severe and there are chills, rigors, high fever 101 to 105, pain more or less severe in the back, loin, and possibly abdomen, at times radiating along the course of the ureter, as in renal colic of calculous origin, painful and frequent urination, nausea and vomiting, constipation, flatulence and at times

distention, simulating acute ileus. Intermittent fevers associated with rigors may be present in suppurative pyelitis, the chills occurring at regular intervals often mistaken for malaria.

The patient may improve, the symptoms gradually subside and the disease become arrested, but it usually becomes chronically seated and we have the chronic pyelitis, at times the process extends and involves the kidney parenchyma and thus we have pyelonephrosis, of varying intensity. In rare cases the infection extends through the pelvis wall with a subsequent perirenal infection.

The pyelitis of pregnancy is an acute catarrhal or suppurative inflammation in the pelvis of the kidney which occurs during the course of a normal pregnancy, the symptoms do not differ from the acute cases outlined above, and is more common during the fourth to eighth month of pregnancy.

In the chronic cases the symptomatology often varies markedly and unless associated with symptoms directly referable to the kidney are often overlooked and a wrong diagnosis made, the symptoms in some cases are pronounced while in others they are practically nil. Many cases have periodical exacerbations between which they feel perfectly well.

The following symptoms any of which may be encountered are pain in the back, between the lower ribs and the iliac crest, this may be only a dull ache or of a more severe character, this pain is usually more pronounced at retiring and early upon arising, pain in the loin is very frequent and tends to radiate towards the mid line in front or may follow the course of the ureter, this pain may be of dull aching character or rather sharp like a knife cutting, and at times is exaggerated upon deep breathing, occasionally we find the pain on the side that is not infect-

ed, tenderness in loin and abdomen of the affected side, and perhaps a tender kidney, may be palpated, the absence of tenderness is of no significance, Malaise, headache, painful and frequent urination, pain in the bladder, these last two may be more marked preceeding an exacerbation, pains in the neck and legs, constipation and flatulence are very common.

Cases of chronic pyelitis may have blockage of the ureter due to pus, or pathological changes due to the disease itself in which case you would have all of the symptoms of an acute condition, this usually causes involvement of the kidney parenchyma, and when the condition is not relieved either naturally or aided by ureteral manipulation or other means, a pyonephrosis with destruction of the kidney will result, of course any infection of the kidney pelvis may and often does extend and involve the kidney parenchyma.

Blood.—The blood picture in the acute cases shows leucocytosis from slight up to as high as 40,000 per c.m. with increase of the polymorphous variety 80 to 90%. The chronic cases may show normal blood picture although during acute exacerbation will show a leucocytosis but not as marked as in the acute cases as a rule, slight anaemia may be present in long continued debilitated cases. Culver in a series of 100 cases could not obtain a positive blood culture in any of the cases although taken at various times during their infection.

Bladder Urine.—The bladder urine usually shows pus cells in varying amounts, but absence of pus in repeated examinations does not rule out pyelitis, in colon bacillus infections the pus is usually marked while in the staphylococcus infections there is not so much bladder pus and oftentimes there is absence even without blockage of

the affected side. Bacteria as a rule can be demonstrated in the bladder urine, a few red blood cells, squamous epithelia, an albumen is common. In suspected cases repeated careful examination of centrifuged specimens from the bladder will give many positive findings where single examinations are negative.

Cystoscopic findings.—About two-thirds of the patients suffering from pyelitis have positive cystoscopic findings, about one-third of the bladders associated with such infection are apparently perfectly normal, and this in spite of constant septic urine. Those with moderate bladder findings predominate, present a loss of normal luster, with hyperaemia about the trigone, usually most marked about the ureteral orifice, from which the septic urine is coming. A small percentage of patients present marked vesical changes characterized by generalized hyperaemia associated with more or less oedema, usually localized, others showed marked trabeculation and the foregoing condition. Bladder observation is often difficult due to the mucopurulent material present and to the relative intolerance of the bladder to the distending medium. This type of bladder closely resembles those seen in tubercular involvement, and requires considerable local treatment before the primary cause can be determined by ureteral catheterization. The most intolerant and distorted bladder I have had with these conditions was in a case of Gonococcal pyelitis.

Diagnosis.—This can be suspected on the symptoms, provided they lead one to suspect the kidney to be the offender, but can only be absolutely made on a careful examination of the bladder urine, followed by ureteral catheterization, with a study of the separate urines, microscopically and bacteriologically; Renal function tests and

radiography together with pyelography may be necessary in classifying the renal lesion.

The physical findings while often not present are valuable as confirmatory evidence, the tenderness in the costo-vertebral angle, the palpable tender kidney, in some cases tenderness along the ureter.

So many acute abdominal conditions are simulated by pyelitis that I think it well to enumerate conditions most often confused namely: Cystitis, Renal calculous, ureteral stricture, salpingitis, pneumonia typhoid fever, appendicitis, pleurisy, cholecystitis, cholelithiasis, influenza, malaria, dysmenorrhoea.

I shall not consume the time it would take to differentiate by the symptoms the above conditions but need only refer to urinalyses, with repeated examination of centrifugalized sediment and if pus or organisms be found resort to ureter catheterization and the various examinations described above.

Renal calculous, X-ray is most useful as reveals shadow of stone in about 90% of cases, but this does not eliminate infection as in practically all calculous there is associated infection, a stone's presence may also be determined by passage of wax tip catheter, and at same time determining the presence of infection.

Ureteral Stricture.—Is best differentiated by the passage of wax bulb on ureter catheter, and also by ureterogram.

Hydronephrosis, symptoms usually not acute, pain in upper abdomen does not radiate to bladder, no frequency, enlargement palpable on that side, if intermittent the disappearance of this enlargement with passage of larger amount of urine than normal at this time. If ureter catheter can be passed by obstruction the amount of fluid collected will indicate dilatation, if cannot

be passed no urine will be collected, showing complete blockage, pyelogram will reveal outline of hydronephrotic sac.

Tubercular pyelitis. — Possible tubercular foci elsewhere in body, absence of ordinary organisms in bladder urine, showing purulent ingredients, presence of tubercle bacilli in urine collected with ureter catheter.

Pyonephrosis.—Usually history of long continued urinary trouble, associated with symptoms of renal deficiency especially where bilateral involvement, decrease or absence of phthalein output on the affected side, delayed appearance of sugar on affected side after injection of phloridzin, delayed appearance of indigo carmin, decrease in urea and sodium chloride in the urine of affected side, pyelogram revealing destruction of the kidney to varying degree.

Perinephric abscess.—Palpable enlargement of around kidney, ballotment may be present, tenderness is more marked to superficial pressure than to deep, sepsis more marked and patient more prostrated, frequently history of injury, absence as a rule of positive urinary findings of pyelitis.

The treatment of pyelitis consists of several considerations. The correction of all conditions that impair the general health of the patient, especially the removal of any septic foci anywhere in the body namely removal of abscessed teeth, diseased tonsils, correction of intestinal stasis, treatment of chronic urethritis, chronic prostatitis, and seminal vesiculitis, also correction of any disease condition of the uterus and its adenexa. The giving of a very nutritious diet to improve the patients general condition and in some cases the giving of some general tonics, in fact the institution of a general line of treatment as used with incipient tuberculosis is very beneficial towards

improving those with impaired constitutional condition.

If infection is found to be due to urethral obstruction it is imperative that this obstruction be relieved before the infection can be influenced, also any obstruction of the ureter must be relieved.

With the removal of these factors which deal more directly with the etiology of the infection, there are certain other agents that may be applied more directly against the disease itself than removal of its cause.

The ingestion of large quantities of water so as to flush the kidney pelvis, removing the infectious material, urinary antiseptics have an important place in the treatment of renal infections, especially is this so of Hexamethylenamine when given in sufficient dosage in the presence of an acid urine. Over doses of this drug are to be avoided as they do produce renal and ureteral irritation, but if given in doses beginning with 10 grains every 4 hours and increasing to fifteen grains after a few days, provided the patient shows no intolerance to the drug as evidenced by varying amount of discomfort and red blood cells in the urine.

To insure an acid medium the giving of acid sodium phosphate in doses of one drachm four times a day is very efficacious and acts as a laxative at the same time insuring the evacuation of the bowel daily.

The members of the colon group of organisms tends to produce acid and requires acid medium for their maximum development. An alkaline, medium, while not completely inhibiting the growth of these organisms, tends to produce adverse conditions for development. One seems justified in producing such a reaction when this infection is present. For this purpose, clinically sodium bicarbonate in drachm doses or sodium citrate in 15

grain doses, to be increased until the urine is distinctly alkaline, seems to give the desired results.

For colon bacillus infections the giving of Hexamethylenamine and sodium phosphate for a week and alternating with alkaline therapy for a week has produced excellent therapeutic response and is worthy of a trial in all instances. Frequently I substitute salol in ten to fifteen grain doses for Hexamethylenamine during the alkalization of the urine.

The most important treatment I consider in these cases is pelvic lavage, that is flushing the pelvis of the kidney with antiseptic fluids through the ureteral catheter, the passage along of the catheter will often alleviate or cause complete subsidence of the symptoms, and especially do the symptoms rapidly subside following pelvic lavage.

Various antiseptics are recommended for this purpose, borie acid, formaldehyde 1-4000, the various silver preparations, personally I prefer silver nitrate in solutions varying from 1-2 to 2% in all cases with the exception of those due to the gonococcus in these I found argyrol 20% more efficacious. In most cases the symptoms subside after one to two lavages and the organisms cease to be present in stained smears after four to eight treatments. The frequency of treatment is determined by the reaction of the individual following treatment.

We must bear in mind that the relief of symptoms is not synonymous with cure, as patients frequently discontinue treatment free from symptoms, but with urines positive for the infecting organisms, to return within a few months with a complete recurrence of symptoms and the bacterial findings of the first examination. It is logical to assume that during this symptomless period the organisms, though still present, are quiescent, but any factor which appears, tending to lower local or general resistance, causes increased bacterial activity with a recurrence of the symptoms. Therefore in all cases treatment should be continued until infection disappears. This can be determined only by repeated cultures. A safe manner of determining this is to obtain two successive sterile urines from the infected side one week apart.

The vaccine therapy in these cases at times appear to yield splendid results if used in conjunction with the above outlined treatment. I prefer to use the autogenous vaccine as then you have the identical organism and bring out tissue reaction in the body to this specific organism. This vaccine is easy to obtain in most every case, in some cases I have used a stock vaccine with good results especially where the staphylococcus was the offender. Of course I only advise the use of vaccine where the organisms are determined and not just as a routine.

BOOK REVIEW

MILK

By PAUL G. HEINEMAN, Ph. D. Director of the Laboratories of the United States Standard Serum Company, Woodworth, Kenosha County, Wisconsin. Illustrated. Philadelphia and London, W. B. Saunders Company, 1919.

The book under review appears to be the most comprehensive work recently issued on the subject. The author has had an unusually wide experience and the book is authoritative, and will meet the needs of the sanitarian and the family physician.

THE SURGICAL CLINICS OF CHICAGO

Volume III Number 4 (Aug. 1919)
The Surgical Clinics of Chicago, Volume III, Number 4 (August 1919). Octavo of 287 pages 116 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Published Bi-Monthly: Price, per year: Paper \$10.00; Cloth \$14.00.

Among the excellent articles in this number are the following: Clinic of Lieut.-Col. Dean Lewis, U.S.A. General Hospital No. 28, Fort Sheridan, Illinois. Peripheral Nerve Surgery. Clinic of Major Lewis J. Pollock, General Hospital No. 28, Fort Sheridan, Illinois. Peripheral Nerve Injuries with Especial Reference to Lesions of the Brachial Plexus. Clinic of Drs. Arthur Dean Bevan and Thor. C. Rothstein, Presbyterian Hospital, Brain Tumor. Clinic of Dr. A. J. Ochsenr, Augustana Hospital. Three cases illustrating Certain Benign Lesions of the Parotid Gland. Clinic of Dr. Daniel N. Eisendreth, Cook County and Michael

Reese Hospitals, Methods of Examination in the Diagnosis of Abdominal Tumors. Clinic of Dr. Charles B. Reed, Wesley Memorial Hospital. Breech Presentation-Management.

MEDICAL CLINICS OF NORTH AMERICA

(The Chicago Number)

THE MEDICAL CLINICS OF NORTH AMERICA. Volume III Number 1. (The Chicago Number, July 1919). Octavo of 277 pages, 59 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Published Bi-Monthly: Price, per year: Paper, \$10. Cloth \$14.

This volume is devoted to internal medicine, and we note some of the articles as follows:

Contribution by Dr. William H. Park, Laboratories of the New York City Department of Health. Practical Immunization Against Diphtheria.

Contribution by Dr. Charles B. Slade, Municipal Sanitarium, Otisville, N. Y. The Relation of Pulmonary Tuberculosis to General Practice.

Clinic of Dr. Thomas F. Reilly, Fordham Hospital. The Minor and misleading Early Symptoms of Disease of the Heart and Circulation.

Contribution by Dr. Oscar M. Schloss, Children's Ward, Bellevue Hospital, New York, Acetone Body Acidosis in Children.

Clinic of Dr. Josephine B. Neal, Willard Parker Hospital. Epidemic Meningitis.

Clinic of Dr. Reuben Ottenberg, Mount Sinai Hospital. A Survey of the Hemorrhagic Diseases with Especial Reference to Blood Findings.

A B S T R A C T S

PUBLIC HEALTH STRESSED ON RED CROSS PEACE PROGRAM

Public health is to be stressed on the peace program of the American Red Cross which has recently been outlined by Henry P. Davison, chairman. A campaign to enlist the sympathies of the people in a public health crusade is to be conducted with a view of arousing public opinion to an appreciation and a desire for higher standards of civic sanitation and to the necessity of establishing Red Cross public health nurses in cities and in rural communities.

During the war the Red Cross worked in enojunction with the United States Public Health Service in establishing sanitary units in thirty-two cities near camps, cantonments, and naval bases. The organization supplied equipment for the laboratories, bacteriologists public health nurses, and the serums and medicines necessary to the conduct of their work. For this purpose, an appropriation of \$526,906.12 was made for the six months ending in June. Of this amount \$100,000 was spent on the prevention of communicable diseases.

The Red Cross has been requested to continue acting in co-operation with the Public Health Service at the ports of the United States. The purpose is to prevent the admittance of immigrants infected with cholera and typhus into America. The prevalence of these diseases in the war-ravaged countries overseas, together with the fact that many are coming from them to America, makes the situation a serious one for this country.

Both the foreign service organiza-

tions of the American Red Cross and those operating in this country will take part in this work. Explicit instructions will be sent out to the personnel of all commissions and units. All information will be wired in order to insure the utmost promptness and efficiency.

Col. Robert E. Olds, American Red Cross Commissioner to Europe, has been one of the most eager agitators of the plan, which has won the hearty approval of all concerned.

THE SERVICE FLAG AT HEAD- QUARTERS

"By a grateful government in memory of the Heroic Women of the Civil War," reads a tablet over which hangs a service flag which bears testimony of the services of American womanhood in the world-war. A single blue star represents the 19,877 American Red Cross nurses who went on active war duty with the army and navy nurse corps and the Red Cross in the cantonments of the country. Some were in the wards of the hospitals overseas, others among the repatries, still others among the frightened children in the devastated sectors, in evacuation stations, operating rooms with shock teams, or mobile operating units.

In memory of the Red Cross nurses who have "gone west" are 198 gold stars on the flag. The first two appear for Miss Edith B. Ayres and Miss Helen Burnett Wood of Chicago, Ill., both of whom were killed by the explosion of a defective shell on the S. S. Magnolia on May 20th, 1917, while on their way to France with early units.

The gold star is for Jane Delano,

chief of the Red Cross nursing service, who died in France April 15, 1919, and who rests with the American dead in a military cemetery, at Base Hospital No. 69, Savenay, France.

SERB SOLDIERS USE AMERICAN LIMBS

The impossibility of obtaining artificial limbs to replace those lost in war is the greatest obstacle which the Serb soldier has to overcome in his transition from a warrior to a citizen capable of making his own livelihood in a world at peace.

Frozen feet, and gangrened wounds resulting from lack of medical attention and exposure, caused the number of amputations in the Serbian army to be especially great. And the American Red Cross has come to the aid of the government and the mutilated men, by establishing in Belgrade a factory for the production of artificial limbs.

A unit of American limb-makers was sent to Belgrade by the Red Cross and began work some time ago. A portion of the two hundred thousand dollar appropriation for relief work in Serbia was reserved for this purpose.

Col. Edgar E. Hums, of Frankford, Ky, the American Red Cross Commissioner to Serbia, writes:

"I have visited their plant (referring to the Red Cross limb manufactory) and have seen numerous persons, including a white haired Serbian woman, being fitted. Many mutilated ex-soldiers, who had despaired of ever again being self-supporting have been fitted with artificial legs, feet, arms or hands, and have resumed their old trades. The Serbian soldiers learn to use the American artificial legs with the greatest skill in an amazingly short time."

AUTO-CHIR FUNCTIONING IN ROUMANIA

The Anto-Chir, the mobile hospital purchased by the American Red Cross for the American Expeditionary Forces at a cost of \$400,000, has been sent to Rumania. It was intended for France, but the signing of the armistice ended the need there, and when Queen Maria of Rumania appealed for help from the Red Cross it was decided to send it to the aid of the diseased and impoverished nation.

The hospital was sent by ship from America to Boglona, Italy, thence on its own wheels to Bucharest under the care of Col. George de Turnowsky of the American army. The entire city turned out to greet it when it pulled up before the palace grounds.

The auto-chir consists of an X-ray truck, an electrogenic group with accessory parts, a heating plant, a rolling machine shop an electric lighting plant, an operating room with plate glass, cabinets containing every known surgical instrument, ambulance trucks containing beds for twenty patients, four ambulances capable of accommodating six severely wounded or twelve slightly wounded men, tent hospital trucks, an acetylene truck for lighting up the hospital, store room trucks with large supplies of blankets, coats, sheets, dressings and drugs. There is also a large truck which contains sleeping rooms for doctors, nurses and internes. Eighteen huge trucks resembling American moving vans, constitute the complete hospital.

It has moved up near the Rumanian army, where it is functioning with a speed and efficiency that is bewildering the army personnel, practically all of which has turned out to see it.

NURSES WIN GREEK DECORATIONS

Eight nurses of the American Red Cross have been decorated by King Alexander of Greece with the medal of Military Merit for their work in fighting the typhus epidemic in Macedonia.

The nurses were Miss Sara Addison, Baltimore; Miss Marie Glauber, Chicago; Miss Alma Hartz, Davenport; Miss Isabelle Martin, San Francisco; Miss Emily Porte, Bridgeport, Connecticut; Miss Clarissa Blakeslee, Drexel Hill, Pennsylvania; Miss Edith Glenn, Bristol, Penn.; and Miss Florence Stone, Plainfield, N. J.

Miss Blakeslee was stricken with typhus, but has recovered.

In presenting the medals, King Alexander said, "I want to thank you for what you have done for Greece and for humanity in your work in Macedonia. First of all you saved from starving tens of thousands of Greeks who were repatriated from Bulgaria after the armistice. Then your doctors and nurses extinguished the typhus epidemic which threatened Greece and all the near East. You fed and clothed thousands, and you stamped out typhus and other diseases among the thousands of Greek refugees from Asia Minor."

IMPROVISED HOSPITALS IN ROUMANIA

Improvised hospitals were erected throughout Roumania by American Red Cross workers to combat the epidemic of typhus. To form beds, limbs of trees, unplanned, merely stripped of their branches, were nailed together and on them were placed crude mattresses. So great was the need of drugs that the supply sent by the Red Cross was insufficient and money was

obtained for the purchase of more in adjoining countries.

Lieut. Col. Gideon Wells, the chief doctor of the commission, said in reporting the situation: "There are still numerous hospitals either closed completely or maintaining a small part of their beds because of the lack of food or bedding or because the physician has been demobilized. With the prevalence of typhus and variola it is most urgently necessary that every possible hospital be opened. In several instances Red Cross units have made possible the re-opening or enlargement of hospitals by furnishing the necessary supplies.

MR. DAVISON DECORATED

Henry P. Davison, chairman of the American Red Cross War Council, has been decorated with a Distinguished Service Cross by the war department for his services to the members of the military during the world war. The presentation was made by Newton D. Baker, Secretary of War, who said that the highest praise could not overestimate the work of Mr. Davison and the organization which he represented.

HOSPITAL ACTIVITIES IN FRANCE

A report of the Bureau of Hospital Administration prepared for the war department shows that during the last nine months of 1918 the American Red Cross performed the following hospital services in France, for military hospitals:

Surgical dressings	21,988,060
Sponges	41,957,426
Nitrous Oxide (gal)	3,832,986
Splints	1,463,200
Surgical instruments	77,101
Drugs (pounds)	15,300
Days of hospital care	1,100,000

When the fighting ceased the American Red Cross was operating twenty-two military hospitals with 14,326 beds.

HOSPITALS IN SIBERIA

Col. R. B. Teusler, Red Cross Commissioner to Siberia, has recently reported on the hospitals under the operation of the American Red Cross in that country. In response to the dire need caused by the epidemics of typhus, cholera, and pneumonia, a new hospital was established at Irkutsk. There is a 1,100 bed hospital in Tchilyabinsk in the Ural Mountains, which was opened by the American Red Cross and later became an important base hospital for the All-Russian government.

At Omsk, the capital of the Kolehak government, a 1,100 bed hospital is being operated and at Petropavlovsk a typhus hospital was equipped and given to the government. There is a two hundred bed hospital at Tomsk, given to the government by the University Clinic, and operated by the Red Cross.

At the request of the mayor of Novonikolaevsk the Red Cross opened a hospital in the Commercial Club of that city. The installation and equipment was under the direction of three Red Cross women from Tokyo, the American consul and a volunteer. This hospital operated during the typhus epidemic.

Important work in the extermination of contagious diseases was done by the Red Cross workers at Siberian railway stations. Delousing plants, disinfecting apparatus and clothing dispensaries were conducted. At Ekaterinburg as many as 3,500 baths were given during April. Many of the persons bathed also received clean clothes.

An anti-typhus train traveled over

more than 4,000 miles in Siberia to stop the spread of typhus and is now being operated under the direction of the same American Red Cross workers on the Perm front. Many of them have become infected with the disease. The expense of this train was first assumed by the Allied Sanitary Commissions and was managed by the American Red Cross which has assumed the entire responsibility of the train now.

At the request of the Szecho-Slovak National Council, work was started by the American Red Cross in eastern Siberia. A commission consisting of 25 doctors and 35 nurses was sent post haste to that portion of the country. This group has since been augmented and a large staff is now at work among the Siberian population there.

THE CANNES CONFERENCE

The leading specialists in public health, tuberculosis, hygiene, sanitation and child welfare attended the conference at Cannes at which America, France, Great Britain, Italy and Japan were represented. A universal health program was planned, which Henry P. Davison, representing the United States, declared to be both ideal and practical—ideal in that its supreme aim is humanity; and practical in that it seeks means and measures to meet the tragic crisis of preventable sickness and sorrow which are daily recurrent. The government of the five powers represented have promised co-operation with the Red Cross.

General purpose of the committee of Red Cross societies as outlined at Cannes was to utilize a central organization which shall assist in promoting sound measures of public health, the training of nurses, the control of tuberculosis, of venereal diseases, malaria and other infectious and the prevention of all preventable diseases.

The following American scientists subscribed their names to the solution: Dr. Lucas, Lieut. Col. William F. Snow, Dr. Hugh S. Cummins, Dr. Samuel McClintock Hamil, Dr. Herman Michael Biggs, Dr. Fritz Talbot, Colonel Richard P. Strong, Dr. L. Emmett Holt, Dr. Wycliffe Rose, Dr. Frederiek F. Russell, Dr. Edward R. Baldwin, Dr. Livingston Farrand, Lieut. Col. Linsley Williams and Dr. Albert Garvin.

Scientists of the four other great powers who have signed the resolution are: Great Britain, Lt. Col. Edward G. Holt, Lt. Col. Sir R. W. Philip, Col. S. L. Cummins, Dr. Henry Kenswood, Sir John Lundsden, Dr. F. Truby King, Col. L. W. Harrison, Sir Arthur Newsholme, Dr. F. N. Cayay Menzies; Italy, Dr. Ettiore Marcha Fava, Prof. Edwards Maragliano, Dr. Barthlomeo Gesie, Lieut. Col. Alde Castelland, Dr. Francesco Valagussa, Dr. Camille Golgi, Col. Caesar Baduel, Dr. Camile Poli, Dr. Guiseppi Bastianelli; France, Dr. Paul Emile Roux, Dr. Edouard Rist, Dr. Armand DeLille; Japan, Dr. T. Kabeshima.

THE RED CROSS SPLINT DEPARTMENT

Of all the services performed by the American Red Cross for the American Expeditionary Forces, none met a greater need than did the splint department. Among 50,000 wounded men there is a percentage of forty fracture cases; accordingly, when the army went overseas, agreement was made whereby the American Red Cross should supply the splints and the army placed with the organization an order for 462,350 splints. Of this number 294,583 were shipped before the signing of the armistice cancelled the remaining number.

At a conference of medical officers

called by Col. Bradley, chief surgeon of the A. E. F., the types of splints to be used were announced as follows: The Thomas Tractor-arm, the Sinclair Modified Thomas Arm, Jones Humerous, Tractor; Jones Cock-up Wrist; Thomas Traction Leg; Hinger Half-Ring Thigh and Leg (Blake-Keller); Long Interrupted Liston; Anterior Thigh and Leg, Cabot Posterior Wire Leg; Ladder Wire Splints; Balkan Frames and Accessories; Galvanized Net Wire Gauze; Maddox or Bradford Frame and Clamps.

Much difficulty was experienced in obtaining material for the manufacture of the splints, but the problem was solved by the purchasing department of the Red Cross. Orders were placed with John Thorne company and with the British Red Cross, being distributed among various factories. The weekly production averaged from 15,000 to 22,000. The largest order given by the army during any one month, was placed August, 1918, and was for 353,000. There were 205 tons of steel used in the manufacture of the splints.

A manual of drawings of the standardized splints was published by the Red Cross. It was later recalled by the army, revised and republished in February, 1919, and is to continue in use.

The Red Cross also provided for the storing of the splints by taking over a warehouse in Paris and placing it in charge of Major Arthur Kelly. Eight laborers were employed here, and there were times when as many as one careful a day of splints left the warehouse, which was open from 7:30 in the morning until midnight. To facilitate shipping, the cases were standardized. From December 1 to 14, 1917, there were 8,085 cases shipped, having a total tonnage of 575.064, which did not include packing material or racks.

Several new appliances were devel-

oped as a result of war needs; the first was the Trench Litter or Snowshoe Litter invented by Lieut. Col] Garcia of the U. S. Medical Corps. This litter is made like a huge snowshoe on which the man can be strapped and carried through the narrowest of trenches.

Stretcher-bars were next made, to raise the leg of a man wearing a Thomas splint to the desired angle when being conveyed from the front to the evacuation hospital, for the Ford ambulances would not permit a man wearing such an appliance to lie flat in the ambulance. Its success caused the army to increase its order from 500 to 1,000.

A wire leg rest to raise the limbs of patients in the hospitals was also devised by Major Kelly, one which would fit either arm or either leg. Of these the army ordered 3,600. The splint department also produced a special adjustable strap which facilitated the placing of a Thomas splint for the stretcher-bearer on the field.

MISS NOYES IS HONORED

WASHINGTON—Miss Clara Noyes, acting director of the department of nursing of the American Red Cross, has been decorated with the Patriotic Service Medal of the American Social Science Association and the Council of the National Institute of Social Science in recognition of "the inestimable service she rendered to her country and its wounded." As director of the Red Cross nursing service Miss Noyes has assigned twenty thousand nurses who responded to their country's call, half of that number served with the American Expeditionary Forces.

Miss Noyes is president of the American Nurses Association and was formerly general superintendent of the Bellevue and Allied Hospitals Training school, New York city.

RED CROSS SUPPLIES NITROUS OXIDE GAS

The American Red Cross supplied great quantities of nitrous oxide gas to the American hospitals in France. To the United States army hospital 699,429 gallons were sent, to the Red Cross hospitals 495,629 gallons and to the different hospitals 251,110 gallons, between September 1917, and October 23, 1918.

Nitrous oxide was first introduced into Europe by Col. Geo. W. Crile at the American Ambulance Hospital at Neuilly. The British learned the technique and used it in their dressing stations.

The Red Cross ordered a complete plant for the manufacture of Nitrous Oxide gas from the Ohio Chemical Co. and this was established at Montreau, about fifty miles from Paris. A Frenchman, experienced in the making of the gas was secured to direct the work, the government permitting his release from the army.

The especial effects of the gas are said by surgeons to cause no lowered vitality, less toxemia, less post-operative respiratory complications and the patient enjoys a quick return to consciousness.

FRENCH CAMPAIGN AGAINST TUBERCULOSIS

French methods to combat the spread of tuberculosis which had gained a strong foothold in the country were practically nullified by the war until the American Red Cross came to the aid of the people.

Thru the agencies of the organization there is now a capacity for 1983 bed patients in the tuberculosis hospitals in Paris and outside of Paris there are accommodations for 5,610.

The Bureau of Tuberculosis is work-

ing in close conjunction with the Rockefeller Commission for the Prevention of Tuberculosis in France. The total number of beds assisted by the Red Cross Bureau of Tuberculosis amounted to 24,185. They were aided to the extent of 3,287,417 francs and relief was supplied to the extent of 794,447 francs.

An appropriation for a Serbian hospital in Paris has been made because it was found, after examination, that twenty per cent. of the 200,000 Serbs studying in the country were tubercular.

CONDITIONS IMPROVED IN BALKANS

BELGRADE. — Conditions have improved in the Balkan states, according to Lieut. Col. Henry W. Anderson of Richmond, Va., who is directing the work of the Red Cross in Roumania, Serbia, Greece, Montenegro, Albania, and Bosnia-Herzegovina.

The improvement is due to the work of the Americans who have distributed medicine, food and clothing among the starving and naked people. Upon the arrival of a Red Cross worker in a town of 390 persons only two well ones were found. Hospitals on the Danube were found to be without sheets, blankets, mattresses or drugs and the only food was musty beans. These hospitals were cleaned and stored with the necessary equipment, clinics were opened, and kitchens were established.

TENTS AS HOSPITALS

Tents as hospitals was a wartime emergency in France which resulted very favorably. Because of the scarcity of wood, tents were established as hospitals by the forty-second and seventy-seventh divisions, each using nine

tents. At the Steeple Chase grounds at Autueil, the American Red Cross placed thirty-nine tents as wards. They had wooden frames and floors and were ventilated by means of eighteen windows. It required six or seven hours with a crew of five or six men to erect such a hospital. When the armistice was signed, the Red Cross was preparing to establish a tent hospital consisting of one hundred and eleven tents.

TYPHUS RAGING IN EUROPE

An epidemic of typhus is raging in Europe and the Red Cross is taking an active part in the effort to stamp out the disease.

Henry P. Davidson reports that 275,000 cases have been found in the belt extending from the Baltic to the Black sea and there is appalling distress in Poland, Lithuania and the Balkans.

The Red Cross has sent 200 representatives to Poland in response to a pathetic appeal from Paderewski. Edicts calculated to stop the spread of the disease have been published in that country, one of them being an order that every person shave and bathe. About 100,000 cases have been reported and the death rate is high.

At the conference held in Cannes, recommendations were made to enlist Red Cross societies to establish a permanent committee of medical experts of the allied countries to deal with the typhus problem.

NURSING SCHOOLS OPENED IN BUFFALO

A post graduate course for public health nurses is to be given in Buffalo for sixteen weeks beginning September 29th, under the auspices of the Buffalo University, the Buffalo Chapter of the American Red Cross, the department of

health, the District Nursing Association, and the Department of hospitals and Dispensaries.

An excellent teaching staff has been secured. A certificate will be given to all students satisfactorily completing the course, which will cost \$25.00. The class will be limited to thirty, and applicants must be registered in New York state or states having equivalent standards. Application blanks will be supplied by the University of Buffalo, College of Arts and Sciences, Niagara Square, Buffalo, N. Y.

MATERNAL WELFARE WORK IN FRANCE TO CONTINUE

The Maternal Welfare Work established in France, under the auspices of the Red Cross Children's Bureau, by Dr. F. L. Adair, associate professor of obstetrics and gynecology in the University of Minnesota, Minneapolis, is to continue. The plan of prenatal consultation established by Dr. Adair is to serve as a model in the School of Peuriculture of Child Welfare, which is to function under the American Red Cross Children's Bureau co-operating with the Medical College of Paris.

In September 1918, Dr. Lucas, director of the Children's Bureau, began an investigation of prenatal care in Paris. He requested that the work be organized systematically under a definite head and Dr. Adair was given the commission.

In the few months, during which the work was established in two sections in Paris, the population of which numbers 600,000, about 500 prospective mothers were cared for in the consultations and also in their homes, which means that this number of families were approached in both a medical and social way.

In the hospital social service work,

which was conducted for only two months, the results were most gratifying and much was accomplished. Over 500 prospective mothers were interviewed and advised how best to meet their new problems of living. The response from the people was pathetic, showing how great had been their need of guidance.

The women were found by securing from the Mairie the list of those who had applied for an "allocation"; by establishing a liason with the maternity hospitals of the neighborhood to secure names of women registered in their consultations who lived in the quarters where prenatal work was being conducted; by establishing friendly relations with the "sages femmes" of the neighborhood and by helping them to give their patients better care; by references from such other agencies as the Rockefeller Commission and Children's Welfare work and by one woman bringing another to the consultation. Thru these agencies about 200 women came to the prenatal consultations during the first six months.

An organization was formed to carry to formon the medico-social work installed in the hospital and an attempt was made to form a society of social visitors who would be capable of teaching the mothers the proper methods of caring for themselves, of making preparations for the birth of the child and giving other information necessary for persons in their condition.

NASAL SINUSES IN CHILDREN

S. Oppenheimer, New York (Journal A. M. A., Aug. 30, 1919), says it seems probable that many cases of meningitis in children are the results of sinusitis. His experience is that chronic sinusitis is common in children. He describes the development of nasal accessory sin-

uses and the questions raised as to their function. The contention, he says, that they are an adjunct to respiration by moistening the inspired air is not supported by histologic findings. The most important inflammatory affections in the child are those of the ethmoid cells, which are more frequently involved than the frontal and sphenoidal sinuses. The anterior group of these cells is most important, as it is situated where the infection most frequently takes place. The recognition of sinusitis in the child is harder than in the adult, the symptoms are more obscure, as a rule, and it is unusual to have a single sinus, only, involved. The frequency of the occurrence of the infectious diseases in childhood, with their concomitant inflammation of the nasal mucosa, explains why the sinuses are affected, especially in scarlet fever, measles, influenza and pneumonia. The accessory nasal sinuses are normally able to drain themselves, aided by the ciliated epithelia, and the normal openings of some of the cavities are also in the most dependent portion of the sinus when the head is held in the upright position. The bacteriology is reviewed, with a special discussion of staphylococci as an infecting organism, and Oppenheimer reports experiments on rabbits which seem to show, in most cases, that staphylococci are only secondary invaders. The recognition of the various sinus invasions in the child is more difficult than in the adult, and the use of carefully made roentgen plates is of great service. Aching pain is also a symptom almost always present, except in chronic cases in which the secretions are freely discharged. A marked symptom of great diagnostic value is the cessation of pain with a free nasal discharge and its return when this lessens. The methods of locating the disease are the same as when it occurs in the adult. Aprosaxia

and disturbance of general health are more or less inevitable associates of chronic, purulent sinusitis, while complications, as in the adult, are not so frequent. The location of the disease varies somewhat with age and the bony development. The recognition of purulent sphenoidal sinusitis is by far the most difficult, as it is practically always combined with ethmoidal changes, and the symptoms are not characteristic. In the treatment of sinusitis in the child, the aim should be to destroy as little tissue as possible, and the intranasal mucosa should be preserved is operative procedures become necessary. The use of some type of suctional negative pressure apparatus for freeing the nose of secretions proves very beneficial. Palliative treatment will cure the majority of acute inflammations when such treatment is intelligently directed toward free drainage. Oppenheimer believes that intranasal treatment is indicated primarily in all cases of sinusitis in children, but he strongly emphasizes the importance of preserving the turbinal tissue. The operative treatment is described, but he believes conditions rarely indicate radical external operation for the relief of purulent sinusitis, and that more conservative measures are better.

TWENTY SUGGESTIONS BY HYGIENIST.

Personal efficiency of employees, losses of time and the resulting losses of wages by workmen, from conditions in industry that impair the functions of the human body in its relation to the work, are two ills which it is the function of hygiene and medicine to reduce or prevent, asserts C. D. Selby, M. D., consulting hygienist of the United States Public Health Service. Dr. Selby is the author of "Twenty

Suggestions to Industrial Physicians and Surgeons," an article which is causing much comment among the health directors of industrial organizations.

As an aid to community betterment, Dr. Selby declares it highly desirable that industrial physicians use the information they acquire of unfavorable communities for remedial purposes in cooperation with local and state medical authorities and industrial establishments.

Dr. Selby's "Twenty Suggestions," which are printed in the current issue of *The Modern Hospital*, Chicago, Ill., charge the industrial physician with the duty of applying his knowledge of medical science and industrial physiology to the prevention of fatigue and the impairment of vitality among industrial workers. The procurement and operation of rest rooms and other facilities for recreation, rest, and exercise are among the duties of medical men toward the working population.

It should be the task and the privilege of the industrial physician in a large establishment to designate the workers who should have the benefit of rest, recreation, and exercise, and the conditions under which they should avail themselves of these benefits.

The physician would determine who should be given special attention with respect to rest periods and recrea-

tion. His recommendation would be based on studies of industrial physiology and fatigue in industrial operations.

Dr. Selby suggests also that physicians in factories and other industrial establishments interest themselves in procurement of suitable refreshment facilities, including restaurants and refreshment stations, the supervision of food and milk supplies, and the sanitary supervision of restaurants, kitchens, and storage rooms for foods.

In order that industrial workers may not be handicapped by lack of knowledge of personal hygiene and the measures essential to health maintenance and healthful habits of work, Dr. Selby advocates that industrial physicians endeavor through lectures, personal talks, bulletins, posters, and articles in the shop papers or house organs, to instruct workmen in matters of personal hygiene, proper clothing, proper food, recreation, rest, exercise, prevention of transmissible diseases, and healthful personal habits.

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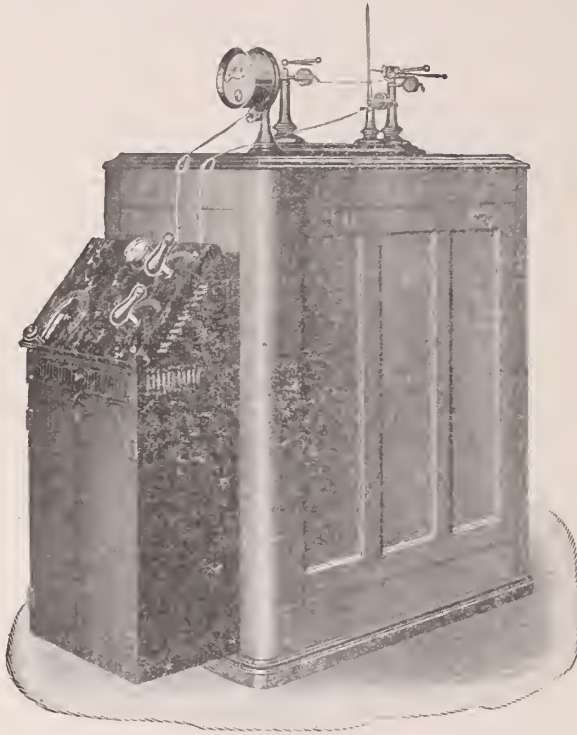
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EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

DEATH OF DR. WALTER PORCHER OF CHARLESTON, S. C.

The entire profession of South Carolina will learn with keen regret of the death of Dr. Walter Porcher of Charleston, November 2nd, 1919. Dr. Porcher has been one of the most prominent and active workers in organized medicine in our State for more than 30 years. He filled numerous positions of honor in the South Carolina Medical Association. He was Secretary for 13 years, and at the close of this long service he was elected President, and as president was aggressive in the up-building of the interests of the Association. He contributed many papers to the Association and to the Journal, and in his specialty was a leader not only in this State, but far beyond its borders. He was the author of many

papers in numerous high class journals throughout the country. An editorial in the "State" expresses well our feelings at this time:

The death of Dr. Walter Peyre Porcher, of Charleston, last Sunday takes from the ranks of physicians of South Carolina an accomplished and distinguished member. He was devoted to his profession and no man lived closer to its best traditions and ideals. In Charleston the medical profession has a history of no common kind. The physicians and surgeons of that city have for more than a century been among the foremost in the country and this Dr. Porcher inherited from his father and his grandfather the understanding of the medical man's place in the social order which gave Charleston its post of honor in the regard of American doctors. Many years ago, when he

was still a young man, Dr. Poreher was elected president of the South Carolina Medical Society and his accomplishments and devotion to the profession were often recognized. Besides, he was a great-hearted and lovable gentleman, of a quaint and charming humor that endeared him to a wide circle of friends, and they, sorrowing for his death, will not forget the good life that he lived and the pleasure that his companionship gave.

DR. NORWOOD

In another part of the Journal will be found a tribute to the memory of Dr. Wesley C. Norwood. The members of the Association have been contributing a small assessment for the past two years to liquidate the indebtedness on the monument erected to Dr. Norwood's memory. This obligation has now been discharged and we pause for a moment to pay further tribute to this distinguished country doctor.

It is interesting to note the following extract from the minutes of the very first meeting of the South Carolina Medical Association for the purpose of reorganization in 1869:

Dr. Norwood, of Abbeville, in presenting his pamphlet upon **Veratrum Viride**, addressed the Association at some length upon the medicinal effect and history of that medicine, and urged its adoption in the treatment of many diseases.

At later meetings the transactions show a virile interest in this important drug. A brief search through the literature at hand and a brief survey of medical society discussions of recent years, discloses the fact that veratrum viride does not occupy as prominent a position in the hands of the therapist as it did formerly. It is a drug of considerable therapeutic efficiency.

Perhaps its place is still secure in the hands of a majority of general practitioners, at least in the Southern States and chiefly in obstetrical practice. It is not mentioned as a remedy by many of the text books on Obstetrics of today. Dr. Lee says: *Veratrum Viride*, first used by Dr. Baker of Eufala, Alabama, in 1859, has attained considerable repute in America and Italy as a specific but large experience does not sustain it.

Williams says: Nor have I had any experience with *Veratrum Viride* which is so highly praised by many American writers.

Hirst says: As soon as the eclamptic attack has passed off inject under the skin ten drops of the fluid extract of *Veratrum Viride*.

The last edition of *Useful Drugs*, put out by the American Medical Association as a basis for teaching *Materia Medica* in the Medical Schools and for the use of Examining Boards, does not mention *Veratrum Viride* at all.

The thought we wish to leave by this brief editorial has been best expressed by Sir James MacKenzie as follows: "You know well that if a man aspires to research work it is to the laboratories or to the hospital wards he is sent. As a result of my experience, I take a very different view, and assert with confidence that medicine will make but halting progress, while whole fields essential to the progress of medicine will remain unexplored, until the general practitioner takes his place as an investigator. The reason for this is that he has opportunities which no other possesses—opportunities which are necessary to the solution of problems essential to the advance of medicine. But before the part that the general practitioner alone can play is understood, we must look upon the science of medicine, its teaching, and its pursuit with new light in our eyes."



ORIGINAL ARTICLES

THE EXAMINATION OF THE HEART IN HEALTH AND DISEASE.

By Dr. J. B. Townsend, Anderson, S. C.

THERE are three classic fears of humanity—the fear of Cancer, the fear of Insanity, and the fear of Heart Disease. Precordial pains and disturbed action of the heart so frequently present in indigestion and the effort syndrome have done much to make this the universal phobia. We encounter many persons with heart murmurs who have been misinformed by their physician as to the gravity of these murmurs and who have been warned and admonished never to allow any one to administer an anesthetic, or never to exert themselves in any way, shape or form for fear that their heart may prove unequal to the emergency. These people live in constant dread of dropping dead on the streets and lead a life that is a burden to themselves and their friends. It is one of the bright spots in the life of the true physician to be able to assure these unfortunates that their fears are groundless and that their symptoms are due to a poisonous idea injected by an incompetent physician rather than to an incurable organic disease.

It is also true that many patients seek relief from such symptoms as bronchitis, digestive disturbances, or fatigue who are in reality suffering from some form of heart disease of which they are not aware. By proper treatment we can do much to relieve

their present symptoms and more to protect them from future harm.

The heart has been rightly called the vital organ of the body and the question of its soundness is one we encounter at the threshold of almost every diseased condition. So that to pass intelligently upon the soundness of a given heart while requiring less nerve certainly calls for more skill and experience than to remove a normal appendix. In this examination no one sign or symptom is sufficient but many factors enter into the equation, all of which have to be weighed and correlated one with the other before we are in a position to pass final judgment.

Let us consider some of the factors which enter into the problem of deciding whether a given heart is or is not diseased.

The History: Here as in other diseased conditions the history is of the very greatest importance, it is as we shall see the deciding factor in the interpretation of many murmurs whether they are to be considered or disregarded. If we bear in mind the simple classification of heart disease proposed by Cabot we have only three forms of heart disease, all of which are inseparably connected with its preceding disease. We have first the Rheumatic heart or the heart of streptococcus infection, occurring most frequently in young adults and attacking the mitral valve, altho the aortic is by no means exempt; second the syphilitic heart occurring most frequently in men between the fourth and fifth decade and attacking the arch or the aorta and the aortic valve, never the mitral, and third the Arterio sclerotic heart, occurring in persons with high blood pressure and

other evidences of arteriosclerosis. In this classification no consideration is taken of the congenital or the goiter heart, we might perhaps, add a fourth class to include all of these not included in the above and call them the doubtful class. It is evident that a carefully taken history not only gives us a safe bet as to the nature and location of the lesion but also a long lead as to our prognosis. Certainly the time spent in history taking is as profitable as that spent in the examination of the patient.

The size of the heart: It must be obvious to all that to measure the size of the heart by clinical methods is an impossibility. Correct measurements can be had in the hands of an expert by the use of the X-ray, but this method can not be carried out on all patients as very few of us are so situated that we can call in the help of the X-ray specialist. This valuable method is at present restricted largely to hospital patients. To percuss out the heart as taught in our student days has proved so unsatisfactory as to be abandoned by most of us. For all practical purposes the size of the heart can be determined by simply locating the maximum apex impulse. In children and in persons with very thin chest walls this can be done by sight but in the vast majority of cases must be located by palpation. In obese persons and those with weak myocardium no impulse can be felt. In these cases the apex located by auscultation selection that point where the sounds are heard loudest. The normal apex should be in the fifth intercostal space three to four and one-half inches to left of the mid line. It is easier to remember that in all persons except those with pendulous breast the nipple is to be used as our land mark. A well defined maximal impulse which lies outside of this nipple line is to be taken as a de-

finite sign of enlargement of the heart. This is especially true if the impulse has moved downward into the sixth or seventh interspace. In children up to the twelfth year the apex beat is to be found normally in the fourth interspace and to the left of the nipple line. In adults the impulse may be pushed out of place by exudates or pulled out of place by adhesions. Enlargement of the heart is never physiological but always pathological. The so-called athletic heart is a myth according to the X-ray findings so that when we have found an enlarged heart we have laid upon us the responsibility of finding the diseased condition which caused it. In this we are greatly assisted by the sounds of the heart. The normal sounds are subject to quite wide variations, in fact it is largely a matter of opinion when some sounds are to be regarded as normal or abnormal. The heart sounds may be accentuated from drugs, exertion or disease, they may be diminished by superimposed adipose tissue or from cardiac weakness. The accentuation, the doubling, the thumping or splashing sounds are all of interest and serve to put us on our guard but as they all occur in health as well as in disease are not themselves sufficient evidence to justify us in coming to any conclusion as to the soundness of the heart.

Abnormal sounds heard at the apex or mitral region: This is the favorite location for murmurs. These murmurs may be presystolic, systolic or may replace the sounds of the heart entirely. They may be functional or they may be organic. In young persons the functional murmurs are by far more frequently heard than organic. Of these functional murmurs the cardio-respiratory is the most often heard. This murmur is systolic in time usually of short duration, high pitched, rather superficial and disappearing when the

breath is held and is probably not of cardiac origin at all. There are other systolic murmurs heard at the apex which do not disappear when the breath is held, may be of almost any type and are not associated by any enlargement of the heart, no history of rheumatism nor any symptom of crippled circulation. These are the murmurs which are found in routine examinations of school children, men for the army, or life insurance examinations. These cases are usually diagnosed mitral regurgitation which diagnosis is practically never correct. Cabot is responsible for the statement that mitral regurgitation as a disease entity may be a possibility but is never a probability and that of the four thousand autopsies recorded in the service of the Massachusetts General Hospital he had never seen such a case. Lewis says that even in the hands of experts the diagnosis of mitral regurgitation is an uncertainty and that apical systolic murmurs are to be neglected in arriving at a prognosis in young men. Temporary and curable mitral regurgitation may result from weakening of the heart muscle, which normally assists in closing the mitral orifice thru the sphincter like contraction of its circular fibers. In aortic regurgitation, chronic nephritis and in arterio-sclerosis where there is dilation of the left ventricle there is mitral regurgitation, due to the stretching of the ring into which the valve is inserted.

Very occasionally there is to be heard at the apex a systolic murmur which is due to the diseased condition of the aortic valve, the classic Flint murmur suspected during life and confirmed at autopsy. Apical systolic murmurs unless backed up by a history of rheumatism or enlargement of the heart or occurring in persons over forty have not the diagnostic significance

which we formerly thought them to have. Presystolic murmurs differ greatly from the systolic in that they are not functional but always organic. It is one of the organic murmurs which is not constant, it may be present today and absent tomorrow, it disappears as the myocardium grows weaker and returns as compensation sets in. This murmur may be brought out by exercise but occasionally it refuses to be coaxed out even by considerable exertion. It can in nearly all cases be elicited by the Morrison test which consists in the administering of amyl nitrite while the stethoscope is placed over the apex, the murmur is heard gradually to reach its maximum, and then gradually disappear. According to Dr. Cabot after the heart has been invaded by infection mitral stenosis is the primary lesion. These changes in the heart give rise to enlargement of the heart; accentuation of the first sound and of the pulmonic second sound of the heart. Even with the confirmatory signs present it is not safe to make a diagnosis of mitral stenosis without the presence of the presystolic murmur.

Abnormal sounds heard in the Pulmonary area: This area has been called by Dr. Osler the area of romance because I suppose you can not believe anything you hear. Murmurs are very frequently heard in this region but little diagnostic importance can be attached to them. However the second pulmonic sound is of great importance as it is an index we have as to the strength of the right heart.

Abnormal sounds heard at the base: The second right intercostal space is spoken of as the aortic because aortic sounds are best heard here, but frequently the aortic sounds are much better heard over the sternum or in the left fourth intercostal space. Murmurs heard here are both systolic and dias-

tole in time. Here as in the mitral region the murmur is not the whole cheese and we are not justified in concluding that because we hear a systolic murmur that stenosis exists or that a diastolic murmur always means aortic regurgitation. The presence of an aneurism or an enlarged and roughened arch of the aorta will give rise to both of these murmurs, also in hypertrophy and dilatation heart murmurs of this nature are very frequently present. Lewis says in the absence of thrill aortic stenosis should never be diagnosed without first diagnosing mitral regurgitation and that aortic regurgitation should never be diagnosed without some of its accompanying signs such as Corrigan pulse, pulsation capillarius, throbbing arteries high pulse pressure, pistol shot phenomena in the brachial and femoral arteries. The history of syphilis greatly assists us and in all cases of aortic disease a Wassermann should be made.

Irregular action of the heart: Irregular action of the heart occurs very frequently in nervous conditions and especially in the effort syndrome as well as in mitral stenosis and in auricular fibrillation where the heart is in a state of absolute arrhythmia. We can distinguish between arrhythmia which is of nervous origin and that of organic origin by simply putting our patient to the effort test when the irregularity is increased by exercise and when the arrhythmia persists even when the pulse rate reaches 120 we can be absolutely assured that the arrhythmia is organic and not functional.

Thrills: Thrills when present are conclusive evidence of the existence of stenosis but unfortunately this very helpful sign is more often absent than present.

In conclusion then Lewis has summarized the whole matter and put it

in a form easy to be remembered as follows:

An aortic diastolic murmur.

Distinct overdilatation of the veins of the neck.

Definite signs of enlargement of the heart.

Irregular heart action which is maintained on exercise.

A diastolic rumble at the apex.

Apical or basal thrill.

Widespread arterial disease or a persistent high blood pressure 180 in elderly men a persistent blood pressure of 160 or over in a young man.

TREATMENT OF HYPERTROPHY OF THE PROSTATE IN THREE STAGES FOR THE BORDER-LINE CASE.

By C. A. Mobley, M.D., Orangeburg, S. C.

SINCE prostatic surgery had its beginning one of its drawbacks has been the uraemia or anuria following removal of the hypertrophied gland.

It was pointed out by Judd of the Mayo Clinic that the operation per se had nothing to do with the causation of uraemic symptoms but that it was the sudden relief of nitra-renal pressure that caused kidney engorgement and complete or partial loss of kidney function; upon failure of the kidney to throw off the body's waste products a condition of uraemia came about. Wright of the University of Minnesota, in January, Surgery, Gynaecology and Obstetrics, claims that as small an amount of residual urine as 100 cc. will cause a flattening of the renal papilla and a consequent anemia of these organs. With a sudden relief of pres-

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sure the pyramids straighten up and the dilated calices contract more blood is thrown into the kidney, and the tubules in their new anatomic arrangement engorged with blood are unable to do their work.

If, however, the bladder is gradually relieved of its residual urine there is time for the kidney to accustom itself to the gradually decreasing intra-renal pressure and no symptoms of uremia intervene.

It is not my purpose to discuss the relative merits of perineal and suprapubic prostatectomy. The supra-pubic operation is now on a firm basis and gives much better functional results than the perineal (as all danger of incontinence is eliminated) and is fully as safe an operative procedure.

It is generally admitted that a supra-pubic prostatectomy done in two stages is safer than the one-stage operation. The removal of the prostate not being done at the time of relief of kidney pressure by the cystostomy.

Judd relieves the pressure by preliminary ureteral cathetrization and then removes the prostate by free bladder incision and removal of the gland under direct inspection. Here, however, we have the danger of infection of the prevesical space super-imposed upon a major surgical operation (the prostatectomy).

If on the other hand we do a supra-pubic drainage as soon as the patient comes under observation, as is done by advocates of the two-stage operation, we thrust upon him a major surgical procedure (the cystostomy) when he is certainly in poor condition to stand it.

Therefore it has occurred to us to combine the methods of these two schools, trying to get the best points of each. The average prostatic with a small amount of residual urine, 40% phthalein and good general condition,

will, barring accidents, get a good result from any method whereby the gland is completely removed and the sphincters preserved intact.

The method we outline is for the borderline case, with low phthalein output, say 12% in one hour, extremely high or extremely low blood pressure, probably with complete retention of urine and with perhaps a degeneration of the heart muscle. A one-stage operation would certainly be a hazardous thing for him.

1st stage—Our method is as follows: Upon the admission of a patient in the above condition urethral catheterization is begun. A small catheter is used. The urethra is irrigated with boric solution before catheterization and flushed with argyrol afterwards. Only a small amount is withdrawn. This is done every 3 or 4 hours until the bladder is emptied. This usually takes two or three days. When the quantity of residual urine has decreased to about one-half what it was, at first, as nearly as we can judge, one-half the amount of urine withdrawn is replaced by weak boric solution. This is to keep up pressure in the kidneys in a gradually lessening degree and at the same time to get rid of the absorption of decomposing residual urine. After the bladder is completely emptied the patient has indwelling catheter secured by adhesive tape and the urine is allowed to flow out continuously. If he should not tolerate this the catheter is removed and he is again catheterized regularly. None of our patients have developed uraemic symptoms during this gradual decompression of the kidneys. However, they all show more or less marked depression: as loss of appetite, general weakness, etc. The specific gravity of the urine invariably decreases during this period. As no operation has yet been done the patient

is in the best possible condition to withstand this storm.

2nd stage: When the phthalein and specific gravity of urine rise again to what we believe is a maximum for the patient in question a cystotomy with insertion of button-end catheter is done under local anaesthetic with a preliminary injection of one-fourth grain morphine and one-150th atropine. The opening in the bladder is made as high as possible, this favors early healing. He is usually out of bed in 48 hours and has but little reaction.

3rd stage: About a week or ten days later if the patient's general condition is good a prostatectomy is done. The hypertrophied prostate being enucleated by passing the finger through the fistula into the bladder the prostate being steadied by two fingers in the rectum. Hemorrhage is controlled by hot packs, etc., and a Freyer tube is inserted and held in place by a stitch. If the old incision is torn by the manipulations this is stitched up. Again in 48 hours the patient is out of bed.

I have used this method with six borderline cases. All are alive. All have perfect urinary control. One man's fistula closed permanently in six days. The longest took 20 days to heal.

The technique as I have outlined it, may appear to you unnecessarily complicated but I believe it will save lives. If it will save lives that would be lost by other methods the extra trouble entailed is worth while.

To summarize the three stages are:

(1) Gradual decompression of kidney with elimination of uraemic symptoms, before any operation is attempted.

(2) Formation of our avenue by which the prostate is to be removed, and a complete blocking off of the pre-

vesical space from danger of infection at the time prostate is removed.

(3) Removal of prostate, with no danger of uraemia or of infecting the space of Retzius.

WESLEY U. NORWOOD, M.D.

Appreciation by G. A. Neuffer, M.D., Abbeville, S. C., Member Memorial Committee, South Carolina Medical Association.

MR. Wesley U. Norwood of Cokesburg, S. C., died at his home in that village, July 15th, 1884, after a long illness in the 78th year of his age. He graduated in medicine at Castleton, Vermont, and practised his profession for over fifty years. His success as a practitioner was great and only limited by his power of endurance and willingness to work. His physical capability for work was remarkable, and this together with energy, promptness, self confidence, added to real ability secured and maintained a practice to which few attain. In recognition of his distinguished position as a practitioner, he was elected to a Professorship in Oglethorpe Medical College, Savannah, Ga., in 1856, which he declined.

Dr. Norwood is known throughout the world for his labors and discourses in reference to the therapeutical effects of *Veratrum Viride*. The money derived from the sale of this preparation known as "Norwoods Tincture," brought him a handsome income and fortune. The Shakers of Mount Lebanon, W. Va., manufactured the tincture and paid Dr. Norwood a royalty. During the civil war Dr. Norwood like everybody else in the South, sacrificed everything he had for his country; when the war ended in 1865 he returned to Cokesbury penniless. During the

war he had not heard from the Shakers and had been completely out of touch with them.

The Shakers, however, had not forgotten him; they had kept a strict account of his royalty, as they continued to make Norwood's Tincture and turned over to him quite a handsome sum which had accumulated during the war. By this fortunate occurrence Dr. Norwood was about the only man in Cokesbury who had real money, the others had plenty of Confederate money which was then worthless.

Dr. Norwood very wisely invested his money in land; and bought some Piedmont Cotton Mill stock.

Dr. Norwood's name appears in the list of the members of the Abbeville County Medical Society published May 4th, 1835.

His home was made happy by his genial disposition and his affectionate relations with his family. His tastes and habits were thoroughly domestic. His highest enjoyments were associated with home life. He was a member of the Methodist Church, and was buried in Upper Long Cane cemetery, at Abbeville, S. C.

Death came to him at an age when it is considered that to live much longer is to encounter mental and physical infirmities which render our present existence undesirable. But his powers of mind and body were so well preserved, that his departure seemed untimely.

He was married twice but left no surviving children; two of his sons died in the civil war, his wife and five grand children are his nearest surviving kin.

A life spent in the alleviation of human suffering is itself a grand memorial; but it is only after the course is finished that the salutary services in the silent profession and the added inspiration and influence of an exalted

character and a noble life are fully comprehended and appreciated.

"Death is the crown of life."

SOME OBSERVATIONS ON DIARRHEA ORIGINATING IN FAULTY GASTRIC FUNCTIONING.

George M. Niles, M.D., Atlanta, Ga.

THE term diarrhea is usually applied to the too frequent discharge of more or less fluid stools, and may vary within wide limits. The personal equation must be considered, for, while the majority of individuals secure one daily movement of semi-solid consistence, some consider themselves normal with two or three in 24 hours, and a very few evacuate the bowels only once in two or three days, seeming to suffer from it neither inconvenience nor impairment of health.

When, however, the peristalsis normal to the individual is hastened, when the stools become too frequent and too watery, and when relief is not obtained after the intestinal tract is thoroughly emptied, it is necessary to find the location giving rise to this abnormal condition.

The reader should be reminded that we are dealing with a canal which is lined with various forms of glandular epithelium, and which has to perform functions of digestion, absorption, and elimination, while it is in direct communication with external agencies, some harmless, some beneficial, some dangerous. These functions being mutually complementary, a disorder in one promptly leads to disturbance in the others.

The etiologic factors concerned in the many forms of loose bowel movements will not be specifically considered here, except as they relate to disturbances of the stomach functions,

and this diarrhea expressive of faulty gastric digestion may be denominated gastrogenic diarrhea, or, as characterized by Einhorn and Oppler, diarrhea gastrica.

The fact that digestion of foodstuffs can proceed satisfactorily in the case of patients with increased or diminished, or even lost secretion of the gastric glands, and the fact that, under such conditions the bile, pancreatic juice, and succus entericus seem to take on an increased compensatory activity, permitting metabolism to continue almost normally, has caused many otherwise careful investigators to minimize the importance of gastric delinquencies upon an accelerated fecal current.

An acute enteritis due to gastronomic excesses requires neither diagnostic acumen nor therapeutic skill in its recognition and management, and need not be dwelt upon here.

There are, however, frequently coming under observation cases of chronic diarrhea, where all disturbing factors incident to the small and large intestine, including the auxiliary organs, have been thoroughly investigated, where hygienic, dietetic, and medicinal measures have been intelligently invoked, but the loose bowel movements are not abated.

As in a number of instances of civic and corporate unrighteousness recently brought to light, the chief aim of those concerned in the correction of the abuses was to get "the man higher up," so we, in our efforts to readjust a disquiet peristalsis, should likewise get at "the organ higher up," for in so doing often the key to the whole situation will be revealed.

Hemmeter uses these words in an article recently published: "Whenever there is chronic diarrhea, it is absolutely necessary to examine the stomach contents, even if the patients have no stomach symptoms."

Blackader, of Montreal, stated recently: "More important, however, as an etiological factor in the production of loose movements, is a faulty performance of gastric functions. Both defective secretion and defective motility favor fermentation in the gastric contents, and lead to the development of irritating organic acids and gasses, and also to a great increase of bacterial growth. Hypersecretion with marked hyperacidity of the gastric contents may, by the discharge of extremely acid chyme into the duodenum, neutralize the normal alkalinity of the contents of the small intestine, and by so doing inhibit the action of the pancreatic enzymes, irritate the intestinal mucosa, and interfere with absorption."

In establishing the diagnosis of gastrogenic diarrhea, the first point to note is the history of present or past stomach symptoms.

Unless in an indirect manner, a hyperacid stomach will not cause diarrhea—on the contrary, constipation is usually present. My records for the past several years disclose only one instance of a chronic diarrhea, that could be fairly ascribed to a hyperchlorhydria.

In achylia gastrica diarrhea is extremely common. Stockton noted 31 patients complaining of chronic diarrhea out of 115, and Woehnert, in analyzing the histories of 16 cases, found diarrhea in the majority. Von Tabora observed typical diarrhea in twenty per cent. of his cases, while my own records approximate thirty per cent. of diarrheal histories where there was found either absence or marked diminution of gastric juice.

Subjectively, Kincaid remarks that this diarrhea is rather different from that due to primary intestinal disturbance, in that it occurs without straining and usually without pain, though there may be colicky pains, varying in

severity with the size and character of the meal. Occasionally the bowels move several times in succession early in the mornings, the stools being large and containing visible particles of undigested food. Also the desire to evacuate the bowels soon after a hearty meal is of frequent occurrence, the reason being apparent.

It has also been proved that in hypochlorhydria conditions overgastric motility is the rule, and that the extra activity beginning in the stomach starts a wave which rapidly continues to the colon. This I have observed more often after breakfast.

Another fruitful source of gastrogenic diarrhea is found when, unchecked by the antiseptic power of free acid, the intestines are flooded by specific microbes from the stomach, completely overwhelming their normal flora. There is then set up, according to the composition of the nutritive soil, either an "intestinal putrefying dyspepsia," spoken of by Von Tabora, or, more often, an "intestinal fermentative dyspepsia" as described by Schmidt and Strasburger.

Long continued gastric achylia may be followed by pancreatic achylia, producing "secondary insufficiency of the digestion of the small intestine," as denominated by Schutz. Under such conditions we find in the feces yeast, sarcinae, long bacilli, or flagellates, originated in the stomach and propagated in the intestines.

Barring that produced by intestinal parasites, the most important information concerning the etiology of practically every form of chronic diarrhea is obtained by a painstaking examination of the stools after the Schmidt-Strasburger test diet, and, while it demands some care and attention to detail, the data gained is nearly always amply worth the trouble entailed.

This test diet in its simplest method

consists of the following: Morning, coffee, tea or cocoa with much milk, oatmeal with milk, a soft-boiled egg, a roll with much butter. Noon, bouillon, if desired, four ounces of lean minced beef roasted in butter, half raw inside, a whole plate of finely mashed potatoes, tea with milk, a roll with butter. Evening, oatmeal with plenty of milk, one or two eggs cooked in any desired way, or roast veal if preferred, a roll with butter, and tea with milk.

This should be kept up for about three days, and the stool then examined microscopically. The presence of undigested connective tissue, especially if there is much of it, is nearly always sufficient to name the stomach as the culprit.

Schmidt and Aaron claim, and I believe correctly, that of all the digestive secretions, the stomach juice alone can digest raw connective tissue.

Very occasionally there is a hypochlorhydric stomach that seems capable of digesting this tissue, and on the other hand there are hyperacid ones that seem inadequate to the task, but such rare exceptions need not militate against the value of this test, for in such instances there will be other indications pointing to a defective gastric performance.

Another test for the activity of stomach digestion is the desmoid-test of Sahli. This test consists of tying a small rubber bag filled with methylene-blue with a thread of catgut. This bag is swallowed with the noon meal, and if within 24 hours the urine turns blue, the stomach is doing fair work, for catgut is another substance only amenable to solution in the stomach, he believes.

Having become satisfied that a chronic diarrhea is of a gastrogenic nature, the treatment naturally focuses on the stomach, though irritative states of the intestines, concomitant or sec-

ondary, must not be neglected.

In cases of achylia gastrica or hypo-acidity, HCl is the sheet anchor in the treatment, and may be given alone or with pepsin. While we cannot hope to supply enough of either of these agents to carry on normal digestion, we usually get prompt and satisfactory results, not only in gastric but also intestinal indigestion. In a few days the connective tissue disappears from the stools along with a marked amelioration of the diarrhea.

I have noted, as well as others, an occasional achylic stomach that seemed intolerant of HCl, and this idiosyncrasy must be respected when met.

In addition nux vomica, condurango, or orexin before meals will often wake up a sluggish gastric mucosa, and be followed by a satisfactory secretion.

When the pylorus is relaxed and patulous, permitting a too quick emptying of the stomach, as well as the escape of unprepared food into the duodenum, intragastric faradism with external vibratory massage is frequently of decided benefit.

Dietetic regulation is, of course, highly important. Meats should be soft, tender, well cooked and well divided, and as free as possible from connective tissue. Foods containing an excess of cellulose should be avoided, and the well cooked or mashed vegetables and fruit allowed. Especially well borne are the vegetable purees, as those of peas and beans.

Should the teeth be bad, they should be put in order, as thorough mastication is a *sine qua non* in the management of these conditions.

Artificially soured milk, or lacteal

champagne, generally agrees better than sweet milk, not being so prone to set up flatulence. The latter, when used, is best peptonized.

Lavage of the stomach holds a valuable place in the treatment of chronic diarrhea, even in instances where the proof is not clear as to its gastric origin. We sometimes encounter cases, which, for want of a better term, are designated "chronic dyspeptic diarrheas," and where a lavage containing nitrate of silver or salicylic acid gives almost spectacular results.

If antiseptic treatment of the stomach is indicated, as in dilation of the stomach—tonic type—with fermentation and motor insufficiency or stenotic type, with fermentation, motor insufficiency and gastritis, boracic acid, sodium salicylate, thymol, creolin, lysol, or ichthyol, in average strength (about 1:1000) may be employed to advantage. When these medicated douches are used, however, it is well to use a mild saline solution first, then the medicated fluid, then conclude with plain water.

I might fitly add that in every chronic diarrhea, whether from intestinal irritation, from pathogenic bacteria or protozoa, from defects of intestinal absorption or secretion, or even from hurried peristalsis due to impulses received from the large nervous centers in the cord and cerebrum, intelligent investigation of the stomach activity, with proper hygienic and therapeutic measures directed to that much abused viscus, will in a vast majority of instances yield results entirely commensurate with the time and thought thereon expended.

A B S T R A C T S

THE MENACE OF THE PLAGUE

We are reminded by two recent events in widely separated parts of the United States what a serious menace is held over us by the smoldering of the plague in various places. October 29, while the American Public Health Association was meeting in New Orleans, a death from plague occurred in that city, and more cases have been reported since. This was the first human case reported in that city for several years, and plague-infected rats have not been found for some time. A still more ominous occurrence is the recent epidemic of plague in Oakland, Calif. The first case appeared, August 18, in a squirrel hunter, and was followed by thirteen cases of the pneumonic type, twelve of them fatal. Three of the patients, including the original squirrel hunter, were treated at home throughout their illness, with no precautions. The others in whom the identity of the infection was recognized were either hospitalized or completely isolated. The last death in this epidemic occurred on September 11, since which time no further cases have developed. It is inevitable that a certain sense of insecurity will be caused by these events, and that redoubled effort will be made to minimize the danger of squirrel plague infection. The Oakland epidemic suggests the unpleasant possibility of a more widespread outbreak of pneumonic plague where climatic conditions are favorable. It does not seem to be outside the range of possibilities that sooner or later the plague may win a foothold among the rats in the slums of some of our large Northern cities.

If this happens, human pneumonic plague must evidently be looked on as a possible sequel—*Journal A. M. A.*, Nov. 8, 1919.

THE ALLEGED FOOD VALUE OF SACCHARIN.

Not long ago attention was directed in *The Journal* to the subject of physiologic oxidation and its alleged relation to certain catalytic properties of the tissues. The latter, and particularly the blood, are capable of liberating oxygen from hydrogen peroxide by an enzyme-like reaction which has been ascribed to "catalase." It has been assumed by a few investigators, notably Burge, that a measure of this catalytic power of the tissues is an index of their metabolic activity. We need not reiterate here the criticisms of this view which have already been advanced, notably by Beeht. He remarks that since the catalytic power of the blood varies between enormously wide limits under the same conditions, it is unlikely that the catalases are important and that the measurement of them can explain "the mysteries of the processes of oxidation." One of the factors particularly advanced by Burge in support of his theory was the asserted increase in catalase noted as the accompaniment of features known to promote metabolism. Stehle has repeated the studies at the University of Pennsylvania School of Medicine without finding the parallelism on which the catalase theory of metabolism is based. He observed that the fluctuations in the catalase content of the blood are due to variations in the number of red cells. Consequently, Stehle notes,

it is simpler to regard the catalase content as dependent on the number of erythrocytes than to assume any direct relation between catalase and biologic oxidations. Among other compounds, Burge has ascribed to saccharin the property of increasing the catalase content of the blood. Correlating this with an increase in metabolism, he concluded that saccharin exhibits advantages characteristic of foods that are known to augment metabolism. Despite the fact that the doses used by Burge in his experiments amounted to 5 gm. per kilogram of body weight and thus far exceeded any dietetically significant quantities, his seeming approval of the effect of these enormous doses of saccharin was promptly made use of by certain advertisers to promote the use of this chemical substance in the diet. Stehle has disposed of the assumed basis for this undesirable propaganda by what amounts essentially to a denial of the claim made. The advocacy of saccharin as a food can no longer pose in the garb of scientific proof.—*Journal A. M. A.*, November 8, 1919.

POLITICS PLAYS WITH PUBLIC HEALTH

The dictum of Disraeli that the care of the public health is of primary importance to the state seems frequently to have been taken by the politician to mean that positions in the public health department are primarily for his disposal. Newspapers coming from Hawaii indicate that the game has been played in that territory with all the old angles. About a year ago a new governor was appointed. At the time of his appointment the executive head of the public health department was a man who had been in public health work in Hawaii for some twen-

ty-five years. During the time of his incumbency an organization was established that prominent public health authorities appraised as probably equal to any health department in the United States and better than the majority. The new governor removed the incumbent and appointed as head a business man—to be specific, a salesman of automobiles. According to the newspapers, the qualifications of the new health official soon were taxed to the utmost and he found himself somewhat in the position of a driver who holds the wheel on a car after the steering knuckle has broken. In an attempt to get out from under he involved himself with a local health officer, and according to the Honolulu papers the governor is now looking for a new head for the health department. One of the requirements is that he shall not be a business man—a knowledge of automobiles will not be considered necessary.—*Journal A. M. A.*, Nov. 8, 1919.

PREVENTION OF DISEASE.

In remarks relating to an inquiry as to the prevention of ordinary epidemic diseases and the future trend of methods to this end, G. A. Soper, New York (*Journal A. M. A.*, Nov. 8, 1919) says that the scope of such inquiry is necessarily limited to the small portion of the world's population available for such efforts, and the records are therefore imperfect. As regards the great epidemic diseases we find that definite and effective procedure are available to combat most of them. The existing difficulty is in the practical application of these procedures, and also because the diseases themselves have to be combated mainly or often among peoples who live under very insanitary conditions. It is in consequence of this that

when cases of cholera, plague and typhus are occasionally brought to western countries there is little fear of them, but when they occur in some other countries it may be impossible to stamp them out. A single case is quickly managed, but a widespread epidemic may be uncontrollable. So far as influenza, the greatest of all epidemic diseases, is concerned, we know nothing. We do not know what influenza is nor how it can be prevented. It is to be hoped that the intensive studies being made may relieve the situation, but so far nothing practical has been deduced. Soper remarks on the disorders that were so unmanageable in former years, like scarlet, fever, diphtheria, measles, etc., and which of late years have come down to a low and uniform prevalence. In some of these we know no more about their cause than we did before, and they are less prevalent more on account of indirect influences that bear on them, than on any active measures now being taken. It is impossible to say just how this is, but probably it has something to do with the higher standards of living. Disease disappears with dirt, ignorance and disorder, and there is proportionately less chance of its spreading with improvement in these respects. In the management of the respiratory affections terminating often in pneumonia, the least progress has been made. The group constitutes the leading cause of death in most civilized countries. The death rate curve from pneumonia is different from that of any other infection. First, it lacks uniformity to a marked degree. Second, it is always high. Third, it is not declining. Its behavior is characteristically epidemic and no means have yet been discovered to control it. These facts should be recognized at once. The great fields of effort against epide-

mic disease are: First, sanitation, the disadvantages of which are the difficulties of sanitary work in small communities. Second, administration, or board of health, work which must be skilful and uncorrupted by political or other considerations. An important field for administrative health regulation, only recently fully appreciated, is the prevention of disease connected with industrial occupations. Personal precautions are restricted and uncoordinated as generally practiced. Soper lists the various methods—sanitation, board of health work and personal precautions—under their various sub-heads of water supply, sewerage, land drainage and cleaning, isolation of the infectious sick, vital statistics, supervision of food, etc., sanitary inspection of dwellings and work, plumbing regulation and supervision of dangerous occupations. Personal precautions are the rules of good health and cleanliness, avoidance of dangerous drugs, foods, etc. When these procedures are considered in relation to rural conditions, it is found that most of them are not applied, though the general death rate from all causes is slightly higher in the cities. Diseases that have occurred in the camps during the late war have been explained by some on the ground that the men were largely from rural districts, and had not acquired the immunity of the urban resident. War experience has been very instructive in showing that danger lies in direct and often obvious channels instead of roundabout and mysterious ones. It has also shown us our failures, especially in our fight against respiratory affections. The results obtained are not only available in war but in civil conditions. Schools of hygiene and the insurance companies can help in public education, but competent professors in our medical schools

and universities should take the leadership in this work. The responsibility for the teaching that is required belongs primarily to them.

CALOMEL INUNCTIONS

H. N. Cole and Sidney Littman, Cleveland (Journal A. M. A., Nov. 8, 1919), have experimented with the effects of the substitution of calomel inunctions for syphilis instead of the mercurial blue ointment, which is very uncleanly, leads to discovery, and frequently sets up an irritation of the skin. The advantage of lack of salivation means lack of effect on the system. Brief notes are given of 54 patients treated intensively with calomel rubs, and the conclusions reached are as follows: "1. Calomel inunctions are almost totally inefficient against primary and secondary syphilis. 2. Calomel inunctions very rarely produce salivation or gingivitis. This means poor absorption of the mercury and explains this clinical inefficiency. 3. Calomel rubs occasionally produce a dermatitis. These results have led us to abandon calomel inunctions, and we would strongly advise against their further use in the treatment of syphilis."

MALARIA CONTROL

"Malaria is recognized as one of the most serious of the disabling diseases of man," says Wickliffe Rose, New York (Journal A. M. A., Nov. 8, 1919). In mild form it is world-wide in distribution, and in its malignant form belts the globe in a broad zone, including tropical and semi-tropical regions. There are few diseases, however, he says, that present so many vulnerable points of attack and which, perhaps, can be more definitely or certainly controlled. The great drawback to anti-

malarial measures is the cost. But recent demonstrations indicate that malaria control can be put within the reach of the average community. Rose reports experiments of four general types made in the field for ascertaining the degree of efficiency under given conditions, and the cost of malaria control by anti-mosquito measures, by the screening of houses, by administration of immunizing quinin and by direct attack on the parasite in the blood of the human carrier. Measures of the first type were tested at Crossett, a lumber town of 2,129 inhabitants in Ashley County in southeastern Arkansas, about 12 miles north of the Louisiana line. Crossett lies in a level, low-lying region at the edge of the so-called "uplands." A large lumber corporation assisted in the anti-mosquito measures. The details of the work are given, and the same were undertaken at another town, Hamburg, under somewhat more difficult conditions. A further demonstration was made in 1918 in four Arkansas towns, and the results show the possibility of mosquito control and that it pays. Like tests of screening were made, also of immunizing carriers, and immunizing doses generally, in other communities. The conclusions are that in an average town of 1,000 inhabitants or more, with a reasonably high infection rate, malaria control by anti-mosquito measures is economically favorable; in fact, a sound business investment. In heavily infected regions, where the cost of mosquito control would be prohibitive, the amount of malaria may be greatly reduced by screening, immunizing quinin or destroying the parasite in carriers, and justify the hope that with the systematic application of these measures the malaria can be held within reasonable bounds, within limits of cost that the average community can

afford. It will be prepared to provide the funds when the results are shown and the continuation of demonstrations is advisable. The article is illustrated.

SYPHILLIS OF THE EPIDIDYMISS

H. E. Michelson, Minneapolis, (*Journal A. M. A.*, Nov. 8, 1919), says that syphilitic involvement of the epididymis or cord is rare and if present is often overlooked. He finds comparatively little literature on this subject and offers his notes with the hope that the scrotal contents will be more often examined in the routine handling of syphilitic cases. Three forms of syphilitic epididymitis have been described: (1) acute diffuse interstitial; (2) chronic diffuse interstitial, and (3) gummatous (circumscribed). The acute diffuse interstitial type may occur the second month after infection, and there is swelling and induration and some pain. Later it is usually solid and somewhat sensitive, and in some cases the epididymis becomes atrophic, occluding the lumen. It seldom extends to the testicle, and the two epididymides rarely get affected at the same time. The chronic diffuse interstitial type is a connective tissue condition which may follow the acute. It is a slow, insidious type and may consist of a series of distinct cartilaginous indurations. It is usually painless until the patient's attention is called to it, when he may complain of dragging sensations and tingling pain. The induration does not taper off into normal tissue, and the vas deferens is seldom involved. The effusion, occurring at one stage of another, may be due to obstruction of circulation or to chronic passive congestion not large in amount. The gummatous type begins in the late period of the disease, showing itself in several small nodules, scat-

tered or close together, painless and insidious in development. They rarely break down to the extent of rupturing externally. Several cases are reported showing the different types. The more common type is the chronic diffuse interstitial one. The entire epididymis is frequently involved. Some cases of hydrocele are also due to syphilis.

RAGWEED DERMATITIS

R. L. Sutton, Kansas City Mo. (*Journal A. M.*, Nov. 8, 1919), says that the important part played by anaphylaxis in the causation of various eruptions has long been recognized, and quotes from Cooke and others as to the accepted explanation of the phenomenon. He reports four cases of dermatitis, the cause of which is traced to ragweed pollen, and which yielded to specific treatment, with extracts of the same. The results were fairly good when the patients were able to follow up the treatment. The patients were all stock men or farmers. In one instance the treatment could not be regularly carried out and the benefits could not be obtained. The plants which cause such dermatitis are probably the same as those causing hay-fever, and "the principal offenders, as Lowdermilk, Scheppergrell and others have demonstrated, are the common ragweed and the giant ragweed, with mugwort (*Artemisia heterophylla*), western ragweed (*Ambrosia psilostachya*) and bur marsh elder (*Iva xanthifolia*) in the lesser roles." The size of the pollen, as Scheppergrell has said, is responsible for the eruptions, that of ragweed being so small and light that it is easily carried by the wind over considerable areas of territory. The initial dose should be small, not over from 0.00001 to 0.00003 mg. of pollen protein, increasing afterward accord-

ing to the reaction obtained. A safe plan is to inject the vaccine every third or fifth day, increasing from 10 to 30 per cent. each time. The reaction is occasionally very severe, and it is always well to have atropin and epinephrin solutions at hand in case they are needed. The local treatment is that of an eczema. The article is illustrated.

REACTION TO SHOCK

In a preliminary report of a study of the physiologic reaction in anaphylactic and peptone shock (Journal A. M. A., Nov. 1, 1919), J. P. Simonds, Chicago, through the study of the comparative anatomy of the hepatic circulation, reaches the interpretation of the physiologic mechanism, namely, that the fundamental physiologic reaction in anaphylactic and peptone shock in dogs is a spasm of the smooth muscle of the walls of the hepatic vein and its branches. In guinea-pigs and rabbits this is less developed, and this anatomic difference or a similar one may account for certain types of asthma and serum reaction in human beings. It may also bring peptone shock into relation with surgical and wound shock. "It is only necessary to recall that among the theories advanced by various authors who have studied shock under war conditions is one which makes the absorption of the soluble products of damaged muscle in wounds responsible for the condition. Furthermore, it is obvious that any prolonged spasm of the hepatic vein and its branches, such as occurs in peptone shock in the dog, will lead to the same condition in the general circulation, or at least in the splanchnic area of sequestration of blood in the penules and capillaries as was observed by Jackson and Janeway in the

shock produced by them by the mechanical obstruction of the vena cava for limited periods of time." In interpreting the results of experiments on dogs, especially noting those on blood pressure, this peculiarity of the hepatic vein must be taken into account. The author promises a further discussion of the subject in a paper on the interpretation of the blood pressure curve following epinephrin injection.

FOREIGN BODY IN THE NOSE

Bryed Wilson, Chicago (Journal A. M. A., Nov. 8, 1919), gives an account of a man suffering with obstruction of the right side of the nose, with purulent discharge, causing distress and interference in breathing. Examination with cocaine anesthesia revealed a hard mass, part of which was removed in small pieces, but the posterior and larger portion had to be pushed back and expectorated through the mouth. The patient could not explain how the cherry pit, which formed the nucleus of the mass, became lodged in his nose, but it probably occurred in sneezing or coughing while eating cherries. On removal of the mass the symptoms partially subsided and a cure followed a few days later.

HYDROCELE OPERATION

Dewell Gann, Jr., Little Rock, Ark., (Journal A. M. A., Nov. 1, 1919), offers a modification of Andrew's bottle operation for hydrocele, consisting in a skin incision beginning over the cord, near the spine of the pubis, extending outward and upward along the ligamentum inguinale, for which he claims certain advantages over the usual anterior serotal incision, which it is difficult to sterilize properly. The conval-

escence is, therefore, likely to be more rapid. By the proposed method when the cord is exposed slight traction with gauze will bring the funicular portion of the sac into the lower angle of the incision, and gentle pressure with the finger will indicate the point of fluctuation where a needle can be inserted and the fluid withdrawn without danger to the cord, testicle or epididymis. The testicle and sac, of any size, may be delivered without the least difficulty. The final technic is that of the original Andrew's operation.

LOBAR PNEUMONIA

The at present usually accepted view that recovery from acute lobar pneumonia is altogether due to protective substances in the blood is questioned by F. T. Lord, Boston (*Journal A. M. A.*, Nov. 8, 1919). These protective substances have been demonstrated in small quantities, but at times they are not demonstrable at all. Bull's discovery of the importance of agglutinins in the disappearance of pneumococci from the blood, and that of Cole of soluble inhibiting substances in the blood with the property of neutralizing pneumococcus antibodies, mark an advance in our theories. It is possible, of course, that the methods available for the demonstration of humoral immunity are inadequate, but the facts suggest that the humoral factors, while important, are, by themselves alone, insufficient to explain the crisis in pneumonia. In explaining resolution, it has long been clear that enzymatic action must account for the solution of the exudate. Sorensen has called attention to the important relation between H-ion concentration and enzymatic processes in general. Local biochemical changes, as well as humoral factors, may be of importance, and Lord groups these un-

der several headings, such as the production of acid in the metabolism of pneumonia, as shown by diminished carbondioxid content of the blood, an increased ammonia output in the urine, an increased titrable acidity, and an increased alkali tolerance. A partial isolation of the pneumonic lung may also play a part, and this suggests that there may be biochemical changes there which are only slightly reflected in the body as a whole. Experiments with the pneumococcus indicate that it is susceptible to varying H-ion concentration. The production of acid is the most important bactericidal factor in the short viability of the pneumococcus in glucose bouillon cultures. Lord and Nye have shown that a critical degree of H-ion concentration has a bearing on the dissolution of pneumococci. The H-ion concentration of the press juice from the pneumonic lung at necropsy in fatal cases is higher than that of other tissues of the body. Lord reports observations in experiments on dogs with experimental Friedlander and pneumococcus pneumonia, and shows that in one case the H-ion concentration in one involved lobe was 6.0 and that of another 5.4. From the former pure culture of pneumococcus was obtained, but from the latter no growth of pneumococci was obtained. To judge from observations on the acid death point of the pneumococcus, slightly higher concentration than 6.0 would probably be fatal to the organisms. As Lord has shown elsewhere, cellular material from a pneumonic lung in a state of gray or red-gray hepatization contains a proteolytic enzyme capable of digesting coagulated blood serum at a H-ion concentration of 7.3 to 6.7, inclusive, and inactive in more acid concentrations. It also contains a proteolytic, peptone-splitting enzyme most active at 6.3 or 5.2. "The finding

of two enzymes in the pneumonic exudate, one digesting coagulated blood serum in weakly alkaline and weakly acid mediums and the other splitting peptone to amino-acid nitrogen with an optimum activity in still more acid mediums, may serve to suggest, independently of the previous observations, that the pneumonic exudate undergoes an increase in H-ion concentration, according to the principle Michaelis established for enzymes in general, that the H-ion concentration of tissue fluid, containing specific enzymes, is the same as that at which the enzymes work best." The findings suggest a theory in explaining of recovery from pneumonia in the course of which humoral immunity is assisted by local biochemical changes. Acidity may be due to partial isolation of the pneumonic lung, permitting a local increase of H-ion concentration, and when this concentration reaches the acid death point of the pneumococci, crisis and recovery follow. Resolution may possibly be explained by the action of the enzyme digesting protein and its action in weakly alkaline and weakly acid mediums. As the acidity increases this enzyme action ceases. An enzyme capable of splitting peptone to amino-acid nitrogen, also active during the proteolysis of the fibrin, is further activated at a H-ion concentration of 6.3 or 5.2 and the exudate may be dissolved, and resolution takes place.

NERVE SUTURE AND GRAFTING

C. A. Elsberg, New York (Journal A. M. A., Nov. 8, 1919), makes the following suggestions of surgical principles in the technic of suture and grafting of peripheral nerves. A good knowledge of anatomy is required in the identification of the injured nerves as well as care and patience and ex-

perience. If the surgeon will first expose a normal part of the nerve or nerves below and above the lesion, and work from normal to scar tissue the identification of injured nerves and their branches even in complicated plexus injuries is always possible. The lower end of a divided nerve should always be exposed and freed first because it is the degenerative end. The upper end should be exposed as briefly as possible and handled with special care without tension to approximate the ends. If there is no actual separation of the nerves, but only a bulbous thickening, this should be examined with the utmost care before being cut across. Whether there are signs of complete interruption or not, the bulb should be carefully incised lengthwise in search for nerve bundles that can be saved. If superficial, they can be easily separated, but when deep may require much patience and care. When it is shown that there is complete anatomic discontinuity of the nerve, the bulb or end bulbs should be divided transversely in successive sections until normal funiculi can be recognized. As the upper end of the injured nerve is often swollen, perfectly good funiculi may appear edematous or glairy. Usually there is fairly active bleeding from the intravenous blood vessels when normal funiculi are reached, and this is especially noted in the sciatic nervous and its branches, and in the median nerve. Usually this can be controlled by gentle pressure, but sometimes fine mosquito forceps must be used and ligation of the vessel with very fine catgut or silk. When the peripheral end bulb is being cut, the end appear like smooth, shiny scar tissue until a point is reached where there are many normal funiculi without any scar tissue. In section of the central bulb the transition from scar to nor-

mal is much more gradual. To prevent rotations of the nerve ends and distortion of the nerve pattern, the epineurium must be grasped a little cephalad and a little caudad to the points where the final sections will have to be made. There is probably a definite pattern and arrangement of the nerve funiculi and even the nerve fibers. Elsberg is studying peripheral nerve operations on the human cadaver and finds in most nerves definite groupings of the funiculi at different levels, often so regular that they can be properly brought together in the suture of the two ends. This should be made without tension, but due consideration should be given to the location of branches. The tension can perhaps be prevented by flexion of adjoining joints. The suture itself is a very delicate operation which is described in detail. If the sutures are well placed a fairly accurate apposition of the ends of the nerve funiculi is possible. All the perineural sutures should be passed before tying. If tied tightly the funiculi are bent at the ends with resulting poor approximation. Transplantation of nerves to a more superficial level is sometimes necessary, and of this the technic is too minutely described to admit of brief abstracting. We have not yet any definite answer as to how these grafts act. If the condition of the nerve permits it a neurolysis is always better than a resection and suture, nad the latter far better than grafting. The era of perfect peripheral nerve surgery, Elsberg thinks, is still to come. The article is illustrated.

NERVE INJURIES

K. W. Ney, New Orleans (Journal A. M. A., Nov. 8, 1919), describes the pathologic processes in lesions of peripheral nerves which were rather common

complications of gunshot injuries, and especially of shell wounds, in the recent war. There may be a complete division of the nerve trunk or only a partial one, and function of the part supplied is usually immediately lost. If the fibers are divided, function is not restored until they are completely regenerated. When scar or other interposed tissue prevents the downgrowing axis-cylinders from reaching the divided end of the distal segment, they stray in all directions and form a bulky mass of nerve tissue which constitutes the neuroma frequently found on the proximal end. Scar tissue contracting about a divided nerve or within a nerve trunk destroys the regenerative activity, and a nerve that is not immediately injured may be caught and compressed until its function is lost with degeneration of the axis-cylinders. Such lesions do not develop a neuroma, and when sectioned the ends present a rather gelatinous appearance which may extend some distance up and down the nerve trunk. After many sections in such cases to find normal tissue, nerve suture has been used by New rather than grafts. The majority of patients with peripheral nerve injuries recover without operation, but a considerable time often elapses. Ney reckons the growth of a regenerating axis-cylinder to be from 1.5 to 2 mm. a day, if not hindered by scar tissue or sepsis. Practically all war wounds are infected, and it is not safe to operate on wounds recently healed as it may arouse dormant bacteria. Ney has found it unadvisable to operate in the vicinity of wounds which have supplicated until they have been completely healed for at least three months. The point also arises, then, as to how much progressive nerve degeneration has taken place. It is not enough to say a certain group of muscles are paralyz-

ed, but the slightest function of every muscle should be tested, and the examination and recording of sensory disturbances is of great value. Accurate charts should be made at each examination to show the area involved. Electrical examination is of value in diagnosis, but less so in determining the presence or absence of regenerative changes. Muscular tone is lost from the time of injury and is manifest only a short time before actual voluntary movements. Noy does not believe that a properly conducted aseptic exposure of a nerve and freeing it from scar tissue is liable to do much harm, but there is perhaps too great a tendency in such cases to resort to resection and suture. When the neuroma that tends to form on the retracted nerve is absent it is almost impossible to differentiate between anatomic division or strangulation of the nerve trunk. We are not able at the present time to make nerve sutures perfect as regards the physiologic topography. When the proximal end of a divided nerve is mechanically irritated, the patient feels a tingling sensation in the area of its sensory distribution, and the progress of the downward growth of the axis-cylinder may be very accurately followed by gentle tapping along the course. At first the formication can be elicited only at the level of the lesion, but at the end of six weeks, if regeneration is progressing, it may be found an inch or an inch and a half below this point, and still further later. This means that certainly some sensory fibers have been able to bridge the gap and this sign of formication has a definite prognostic value depending on its intensity and rate of progress.

PERISTALSIS

W. C. Alvarez, San Francisco (Journal A. M. A., Nov. 8, 1919), says that

the fundamental question in gastro-enterology is the cause of the propulsion of the food and excreta through the intestinal tract. He asks, for example, what could the heart specialist do in treating arrhythmias until Gaskell, McWilliam, His and others showed where the beat normally arises and how it is transmitted from sinus to ventricle. We should take hope from this good fortune that has come to our confreres, he says, and follow their method of study. We should study the gastro-intestinal tract in the embryo and in the lower forms of life, the reactions of the muscular coat—its rhythmicity, irritability, etc.—and stop thinking in terms of plumbing and rigid tubes held in one position. Alvarez says: "Six years ago I showed that there is a very definite gradient of rhythmicity in the muscle of the small intestine from duodenum to ileum." It seemed to him then that this might be the essential factor in determining the direction of peristalsis, and in two papers he reviewed much of the literature and showed how many clinical and roentgenologic observations could be explained by accepting this idea. During the past two years he has been able to show that there is a definite gradient of oxidation and carbon dioxid production in the intestinal wall underlying and probably giving rise to the lesser gradients of rhythmicity, tone, etc. Theoretically we can speed up these processes or reverse them. The chemical processes of life, it would appear, go on faster in the duodenum than elsewhere, and if they could be speeded faster in the other portions the process might be reversed. Recent study has shown that the local life processes are greatly speeded up by inflammation, so that it may be that the hypermotility seen in many cases of duodenal ulcer and

cholecystitis, and the hypomotility with appendicitis, may be thus explained. There is another and perhaps more important way of reversing the gradient—by disease toxins. There is considerable evidence that these have such an effect on the heart, and the disordered heart action with digestive disturbances seen existing together after certain infections, such as influenza, may be also thus explained. The author is hoping that further studies of the subject will be richly rewarded.

CLINICAL DIAGNOSIS

H. T. Karsner, Leonard Rothschild and E. S. Crump, Cleveland (*Journal A. M. A.*, Aug. 30, 1919), while noting the great advances in modern medicine, say that the vast majority of clinical diagnoses can be accepted or rejected only on the basis of naked-eye, microscopic, chemical or bacteriologic examination of the body after death. They refer to the percentage of error in diagnosis pointed out by Cabot, and give the results of their own studies of 600 cases equally divided between two large hospitals in Cleveland. As the series is smaller than that of Cabot, and insufficient to permit of the divisions made by him, they decided to classify by organs and systems rather than by special lesions. There are certain marked errors, however, which defy such classification, and these they classified as gross errors and did not include them, but only those instances in which the clinical diagnosis, though perhaps markedly in error, was found correct as to the organ involved. They did, however, include some very obvious errors of omission, numbering 50 of the 600 cases, or eight per cent. As for the hospitals, there was in one six per cent., and in the other 10 per cent. of such errors. There were combined

lesions in some cases, which makes the total of diagnoses exceed 6,000. The data used cover several years, and while they cannot be regarded as indicating the diagnostic ability of the visiting chiefs, they do represent the mean diagnostic ability of the clinics. The authors give in a table the number of cases diagnosed correctly and that of those in which the lesion was overlooked, followed by notes on the special classes of errors. The figures, they say, indicate a distinct though slow tendency toward improvement and the authors offer certain suggestions for bettering things, such as that there should be education of the public to the importance of necropsies, legislative action to obviate the requirement of asking permission for them, improvement of hospital regulations, increased interest of physicians in the postmortem work, encouragement of the "selfish interest in post mortems" on the part of "intelligent relatives of the dead," assignment in large hospitals of certain officials to secure permission for post mortems, information given the family as to the conditions found, a request for necropsy in every fatal case in hospital or private practice, establishment in the hospitals of regular clinical, pathologic conferences and education concerning the value of postmortem examinations to industry and to life insurance.

HEALTH LAWS UNWISE, SAYS PRELATE.

Every state in the Union and every province in Canada has been wrong in its legal enactments intended for the promotion and protection of the citizen's right to health, in the opinion of the Right Rev. Father Moulinier, S. J., of Milwaukee, Wis., president of the Catholic Hospital Association, who

handed down his denunciation of the health laws in a speech before the Ohio Hospital Association at Cleveland.

He opposes the extending of special privileges to sectarian practitioners of whom he instanced Christian Scientists, osteopaths, chiropractics, and uaprapaths. Father Moulinier desires to see the health laws codified to bring all sectarian practitioners under the direction and supervision of qualified medical men whose capacity or function will be that of technician, according to *The Modern Hospital*, Chicago, Ill., which publishes a report of the Cleveland meeting.

The fact that several states, particularly Ohio, have passed legislation granting the right to practice to sectarians of the groups he names, declares the prelate, indicates a past narrow conception by the public and medical profession of the function that medical men perform.

To regard the doctor or surgeon as a technician he conceives to be the right idea of medical practitioners. They are technicians because medical science is scientific in its methods, while the sectarian practitioner builds a fence around his own notions and excludes from consideration all the outlying fields of medical knowledge. Father Moulinier sees a grain of truth in each of the fads and sects of sectarian practice. He declares the medical profession has in the past scorned this truth, and thereby have brought on themselves the blame for the disdirected legislation that several states have placed on their statute books.

MUSTARD GAS

E. K. Marshall, Baltimore (*Journal A. M. A.*, Aug. 30, 1919), describes the composition and effects of the mustard gas (dichlorethylsulphid), which is

not a gas at all but a high boiling, oily liquid which vaporizes slowly in the air. In the concentrations of the gas present in the field, there is probably little systemic effect, but it has a local action on the respiratory tract, eyes and skin. The systemic action of the substance, however, is important as it leads to a better understanding of its action, and hence to a rational method of treatment. Two of the first points to be determined are its toxicity in the form of vapor, and what concentrations are dangerous in the field. Such knowledge is necessary to ascertain how effective protective devices have to be to remove the gas and to furnish a basis for accurate experimental work on treatment. Difficulties arise. The concentration is not accurately known unless chemical analyses of the air are made, and it is found that concentration decreases markedly with time by condensation on the walls of the experimental chamber, absorption by the hair and skin of the animals and probably by decomposition of the substance by moisture in the air. Marshall describes the methods of meeting these difficulties. Without giving detailed figures, he says, it may be said that the gas is extremely toxic. About one part in three million will cause a skin burn, and in much greater quantities, death after some days. The reason why it has been more incapacitating than fatal in war conditions is undoubtedly its low vapor pressure. The symptoms are well known and there is no doubt that in high concentrations it is absorbed through the lungs and produces systemic effects in the body. The mechanism of the action seems to be: "1. Rapid penetration of the substance into the cell by virtue of its high liquid solubility. 2. Hydrolysis by the water within the cell to form hydrochloric acid and dihydroxyethylsulphid. 3.

Destruction by dihydrochloric acid of some part or mechanism of the cell." The ideal treatment for mustard gas poisoning would be to employ some nontoxic substance to penetrate the cell and neutralize the action of the hydrochloric acid. Efforts have been made in this direction but have not been entirely successful. Some persons are more readily affected by mustard gas on the skin than are others. Negroes as a race are more resistant, and from two to three per cent. of white men are hypersensitive, while from 20 to 40 per cent. are resistant. One may be severely affected while others are not at all."

TYPHOID CARRIERS

The surgical treatment of typhoid carriers is the subject of an article by H. J. Nichols, J. S. Simmons and C. O. Stimmel, Washington, D. C. (Journal A. M. A., Aug. 30, 1919). The literature of treatment of typhoid carriers contains the record of a number of apparent cures following cholecystectomy and the use of the roentgen ray, vaccines, lactic acid bacilli and various drugs. The conclusions in these cases, however, are based almost altogether on the results of cultures of the feces, and the authors here cited consider this not altogether conclusive. Under the direction of the surgeon-general's office, examinations were made at the beginning of the war of a large number of men, and on account of the unusual opportunity to investigate the carrier problem, the carriers found were collected, as far as possible, at the Walter Reed General Hospital for treatment and observation. Some of them consented willingly to operation when surgical treatment was advised, and the remainder agreed when the alternatives of court martial and probable cure were explained to them. Sev-

eral cases are reported and the findings in them described. The standard test of operative cure was three successive negative cultures of duodenal contents. The summary and conclusions of the work are given as follows: "1. So-called urinary typhoid carriers are really kidney carriers and can be cured by nephrectomy. An additional argument for operation is present if the infected kidney is functionless. One such case is recorded. 2. 'Intestinal' carriers are really bile passage carriers of two kinds: (a) Cases in which the gallbladder alone is infected. These can be cured by cholecystectomy. Four such cases are recorded. (b) Cases in which the gallbladder and bile passages are both infected. In these cases cholecystectomy does not cure the carrier condition, and the condition is in-curable at present. Two such cases are recorded. 3. The surgical treatment of typhoid carriers, while not perfect, is the best available."

AMERICANS OPERATE 'PIONEER' HOSPITAL IN BALKANS

With the exception of an operating table and a big sterilizer, two American doctors and two nurses "manufactured" an operating room in the Balkans, at Prizren in western Serbia. The doctors in charge were Captain Bradner and Lieut. Krug, on detached service with the American army. Their release was obtained by the American Red Cross that they might engage in public health work in the Balkans with the commissinos sent by the American Red Cross. Equipment was difficult to obtain in the quantities needed, and their clinic was supplied only with an operating table and a sterilizer. An instrument-sterilizer was made out of tin cans; the table and cupboard were packing cases.

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JUVENILE PARETIC

E. L. Hunt, New York (Journal A. M. A., Nov. 8, 1919), describes a case of juvenile paresis—a crippled and demented boy, aged 12, who, up to the age of nine, had been able to attend school, but after that was unable to keep up, and finally became too great a care to be left at home and was sent

to the hospital. Treatment has been of no avail. The laboratory reported a markedly positive Wasserman test both in blood and spinal fluid, nad butyric acid and colloidal gold tests were also positive. All the family were induced to take the Wasserman test excepting the father, who positively refused, and in all it was strongly positive.

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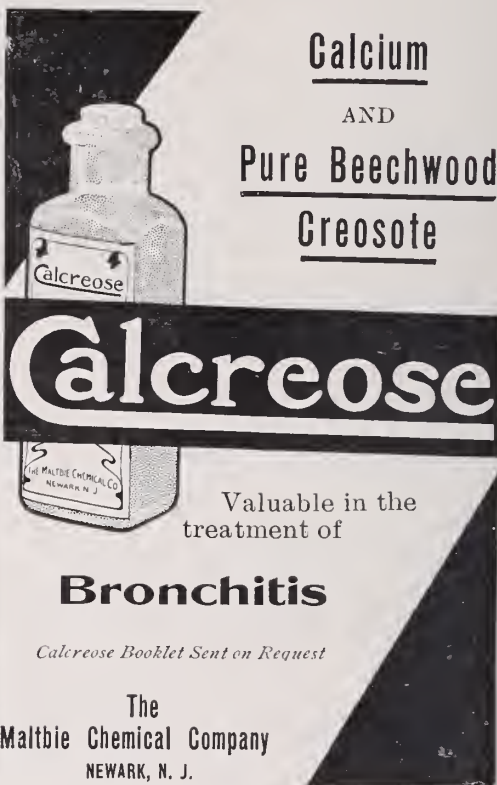
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The Journal OF THE South Carolina Medical Association



Published Every Month Under the Direction of the Board of Councilors.

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J. LaBRUCE WARD, M. D., Columbia, S. C.

EYE, EAR, NOSE, AND THROAT.

E. W. CARPENTER, M. D., Greenville, S. C.

EDITORIAL

MEDICAL SOCIETY OF SOUTH CAROLINA

(Charleston County Medical Society)

Meeting: Nov. 18, 1919.

This, the last meeting before the annual meeting, is by custom given over to the discussion of matters for the benefit of the profession.

Talks were scheduled as follows: Hospital Administration, by Dr. George McF Mood; Medical Education, by Dr. Kenneth M. Lynch; Professional Fees, by Dr. Edward Rutledge.

Dr. Mood discussed matters relating largely to local hospital problems, looking to the betterment of the Roper Hospital.

Dr. Lynch called attention to the responsibilities of the Charleston profession by reason of the fact that the

state institution for medical education is in its midst and necessarily the burden of clinical instruction must rest largely on the shoulders of local men. He criticised the time honored lecture and amphitheatre clinic method of clinical instruction and the system where by the work of most value to future practitioners of medicine, the out-patient clinics, is relegated to the least experienced teacher, keeping the ward and clinic instruction which is of course conducted under far more favorable circumstances to the experienced practitioner and teacher. Dr. Lynch stated that in his belief the system should be reversed and that while lectures and amphitheatre clinics still have a place it is minor in comparison to the part played by the instructor-student-patient close association.

He also stated that in his opinion

clinical faculties are not always selected with an eye single to the advantage of the student but that at times it is to the benefit of the teacher selected, that clinical teachers should be paid for their time used, thereby giving schools control of clinical faculties which they cannot have otherwise that more money must be forthcoming for medical education, and that the medical teacher must be cared for in the financial upheaval or medical education will suffer a blow from the loss of recruits and those already in the ranks from which it will not recover soon.

A considerable discussion followed:

Dr. Rutledge called attention to the necessity of increased pay for practicing physicians and offered a motion to the effect that after December 1, 1919, minimum fees for office visit be \$2.00 and for home visits \$3.00, and other fees increased in proportion. This was carried.

Annual Meeting, Dec. 8, 1919.

Officers were elected for the ensuing year as follows:

President, Dr. Robert Wilson, Jr.

Secretary, Dr. G. F. Heidt.

Treasurer, Dr. J. H. Cannon.

Librarian, Dr. F. G. Cain.

To Board of Censors, Dr. T. Grange Simons.

To Board of Commissioners of Roper Hospital, Dr. E. H. Sparkman.

To Roper Fund Trustees, Dr. H. P. Jackson and Dr. W. H. Price.

Delegate to State Association, Dr. A. R. Taft, Dr. C. P. Aimar, Dr. R. M. Pollitzer, Dr. Kenneth M. Lynch.

Dr. E. A. Hines, Secretary of the State Medical Association, was present and addressed the Society on matters pertaining to the support of the State Medical Journal, hospital standardization, child welfare, and better obstetrics. Considerable discussion follow-

ed and the Society pledged its support in these matters.

After adjournment the Society entertained with a collation and smoker.

NEWS ITEMS FROM THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA.

Dr. John Van de Erve, formerly Professor of Physiology in Marquette University, has been elected to the chair of Physiology and is now conducting that department.

Dr. Lane Mullally has resigned the chair of Obstetrics on account of ill health and is succeeded by Dr. G. Fraser Wilson, Dr. Mullally being elected Emeritus Professor.

Dr. C. P. Amiar has resumed his duties after a period of absence from the city on account of ill health.

Dr. John F. Townsend has been elected Assistant Professor of Ophthalmology and Otology.

Drs. J. C. Sosnowski, E. H. Sparkman and J. S. Rhame, have been elected Assistant Professors of Surgery.

The Medical College opened its regular session on Sept. 26 with a total enrollment in the schools of Medicine, Pharmacy, and Nursing of 152, the largest in the history of the new institution.

The College has this year opened a School of Nursing which it will operate under the same high standard as have been adhered to in the Schools of Medicine and Pharmacy, thus rounding out its program of medical education for the State.

Dr. Albert H. Wilkinson of Wilkes-Barre, Pennsylvania, has been elected Medical Superintendent of the Roper Hospital and has been directing the hospital's affairs since May. Under his direction a number of changes looking

towards administrative improvement have been instituted.

In keeping with progress in medical education the clinical curriculum of the college has been recast so as to bring the instructor and student in close and intimate association over the patient under study, thereby making clinical instruction essentially practical and placing the didactic method of teaching in the background.

The Board of Trustees is requesting the Legislature for an appropriation to cover the cost of expansion of the existing plant in order to increase the capacity of the college and particularly to properly house the Department of Physiology and to allow for the institution of a Department of Experimental Surgery. The request was necessary in order to enable the college to keep abreast of progress and the needs of the day and it is earnestly hoped that the necessary appropriation will be made.

GREETINGS.

When this issue reaches our readers the Holiday Season will be well under way. The Journal wishes that every doctor in South Carolina may have a happy Christmas and a prosperous New Year. We believe that the future of the profession was never so bright, and we are confident that the South Carolina Medical Association is going forward to much greater development in 1920 than at any time in its history.

MEDICAL COLLEGE NOTES

We are delighted to present in this issue the activities of the Medical Profession in Charleston. The editor greatly enjoyed a visit to the city by the sea recently and especially was interested

in the excellent way the South Carolina Medical Society (Charleston County) conducts its affairs. The society pledged itself to give the Journal news from time to time, and to cooperate with the officers of the State Medical Association in every way possible. Charleston has long been one of the important medical centers of the southern states, and with the rapidly expanding Medical College of the State of South Carolina and the commercial future of the city of Charleston, the entire profession will look forward with pleasure to developments.

We would direct especial attention to the action of the South Carolina Medical Society with reference to increased pay for practicing physicians. We feel confident that similar action, where it has not been done, should be taken by physicians throughout the state of South Carolina. We trust that the example set by the Charleston Society with reference to supporting the Journal, will be followed immediately by every county society in the state.

FEE BILL ADOPTED BY OCONEE PHYSICIANS.

The majority of the physicians of Oconee County held a meeting at Seneca Nov. 19th, and adopted the following Fee Bill;

Office Practice

Ordinary Prescription or advice, first call.....	\$2.00 to \$3.00
Ordinary Prescription or advice, after calls.....	\$1.00 to \$2.00
Physical Examination.....	\$5.00
Physical Examination very Complete..	
.....	\$5.00 to \$10.00
Electricity.....	\$3.00 to \$5.00
Dressings.....	\$2.00 to \$5.00

Practice

Visits day Towns.....	\$2.00 to \$3.00
Visits night Towns.....	\$3.00 to \$5.00
Contagious disease.....	\$3.00 to \$5.00
Consultation	\$10.00 to \$35.00
Craniotomy or Eviceration\$1.00 to \$2.00

Obstetrics

Natural Delivery, mileage extra, minimum.....	\$20.00 to 25.00
Delivery of Placenta alone....	\$10.00
Forceps or Version....	\$35.00 to \$50.00
Craniotomy or Eviceration.	\$100 to 200

Country Practice

75 cents per mile plus \$2.00.

SURGERY

Anesthesia.....	5 to 10
Amputation of finger or toe...	20 to 30
Amputation of Metacarpus or Metatarsus.....	30 to 50
Amputation of Forearm or Leg..75 to 125
Amputation of Arm or Thigh	100 to 150
Amputation of Hip or Shoulder.....150 to 250
Amputation of Breast.....	150 to 250
Reducing Dislocation Finger or Toe5 to 10
Reducing Dislocation Jaw....	10 to 30
Reducing Dislocation Hip....	75 to 150

Reducing Dislocation Knee or Elbow..50 to 75
Attention is called to the great responsibility involved in Treating Fractures.	
Fracture Finger or Toe.....	10 to 20
Fracture Colles.....	50 to 75
Fracture Arm or Forearm....	50 to 75
Fracture Leg.....	75 to 100
Fracture Femur.....	75 to 150
Fracture Jaw.....	40 to 50
Fracture Rib.....	5 to 10
Fracture Patella.....	50 to 100
Enucleation of Tonsils.....	35 to 50
Harelip.....	50 to 100
Cleft Palate.....	100 to 200
Trephining.....	100 to 250
Plaster Jacket.....	25 to 50
Plaster Dressing.....	10 to 25
Hernia, reduction by taxis....	25 to 50
Hernia, Radical Cure Operation.....100 to 150
Hernia Radical Cure Operation when strangulated.....	150 to 250
Lithotomy.....	150 to 150
Urethrotomy.....	100 to 150
Paracentesis.....	25 to 50
Hemorrhoids.....	50 to 100
Gonorrhoea	50 to 75
Syphilis.....	100 to 300
Laparotomy	150 to 500
Repair Cervix or Perineum....	50 to 75
Higher charge for operation in an acute inflammatory condition in the abdomen than for operation in the interval.	

ORIGINAL ARTICLES

SOME IMPRESSIONS OF EASTERN CLINICS.

By E. A. Hines M. D., Seneca, S. C.

GRADUATE instruction in the United States at the present time is in a chaotic condition. The remark accredited to Osler 25 years ago, that graduate instruction was the husks of medical teaching applies today in this country as it did then. Undergraduate schools have been brought well nigh to perfection it would seem, or beyond it for practical purposes but so great an authority as Bevan said at Atlantic City meeting of American Medical Association in June 1919 that graduate schools now are upon as low a basis as undergraduate schools 15 or 20 years ago with rare exceptions and that something should be done about it at once. The greatest graduate center for the American doctor until 1914 was Vienna because with his financial resources he controlled the entire faculty of that great hospital. Berlin came next, England and Scotland third, while Paris once the leader lagged far behind. New York has unlimited resources, but for graduate instruction much is desired. The Polyclinic so long supported by Southern doctors is closed. The Post Graduate has vast resources but its policy appears to be largely commercialism—with the science and art of medicine a secondary consideration. The real leaders of our profession as a

rule are not connected with the graduate schools of this type for they have been taken over by the colossal endowments of the undergraduate schools. The graduate department of most of the great Universities have been closed by the war and at best few were worth while. Powerful forces are now at work to make the United States attractive to all the world from a graduate standpoint. Sir William Osler in his 70th year, has headed a world wide movement to make London the most comprehensive graduate center of all time, the initial fund of five million dollars having been assured. These observations have been made because there is a crying need for reform. I met many men hungry for satisfactory instruction, eager to advance in their profession without parting from a lifetime of savings just for a few weeks or months of instruction. I spent four weeks resident in the New York Lying in Hospital—probably the largest obstetrical service in the world with about seven thousand deliveries a year. The course is largely observation, but plenty of that day and night. It would seem that Caesarian section is fast becoming the normal way for a baby to be born—it is almost a daily occurrence. Once a Caesarian always a Caesarian is the slogan. The first question the visiting doctor asks there is “Do you give Pituitrin?” This is flaunting the red rag which begets a very curt reply. It is not given except for operative cases occasionally. I saw only one dose given. The good old granny way of—just waiting is often pursued. Forceps delivery, solid blade, is fairly frequent but a very conservation policy is evident.

Read before the Fourth District Medical Association, Anderson, S. C., April 16, 1919, and published by special request of the Association.

Anesthetics—Ether exclusively in one division. Chloroform exclusively in another division. Nitrous Oxide occasionally for private cases.

Three and one-half percent iodine is painted over the lower abdomen vulva and thighs for operative cases. Chromic catgut for vaginal repair, silk worm gut for skin—always under anesthesia. No hurry about delivery of placenta, and all repairs done while waiting, perhaps one-half hour the average time. Lysol is the favorite general antiseptic, as it was twelve years ago when I was there. Many of the cases run a temperature of 100 degrees for several days but no notice is taken of it. I saw only one douche ordered, and this for an infected perineal wound lysol. In one division cathartics have been abandon post partum. Breast strapped with rubber adhesive plaster, allowed to sit up twenty minutes the eight day—out the ninth. One division lets abortions severely alone—to nature. The other division is more active and clears most of the cases out with the curette. The Chief Surgeon says he does not get good results with the finger as many text books recommend Generally Eclampsia is given expectant treatment, morphine, etc., no accouchement force. Puerperal fever and Eclampsia have been greatly reduced in New York as a result of prenatal care, a better licensed midwifery service and better doctors. I saw only one case of old time puerperal fever—running two months—pelvic abscess, etc. These cases are treated by sunlight and outdoor air day and night on the roof of the hospital. A month in a big hospital like the Lying-in one will see a rich operative clinic and many cases not seen perhaps in a long life of private practice. For instance, I saw a ruptured uterus at the sixth month—no pains of labor—no accident just spontaneous rupture—shock—

hemorrhage—operated—Porro method. (Second case in the history of the Hospital of over 100 years). One complete inversion—great hemorrhage—only saved by blood transfusion, Cit. Soda method. One ruptured ovarian cyst, five days in puerperium. One baby bled to death from clipping a tongue tie—all the resources of the hospital and all the modern methods to stop hemorrhage failed—lived two or three days. I found only three babies out of one hundred on the bottle once when I inquired as to the success of breast feeding. The new born is nursed three hours in the day and four hours at night and not allowed to remain with mothers except when nursing. I took a two weeks general ticket at the Post Graduate and tried to get a quick general idea of the teaching along many lines. I took a three weeks special ticket in gynecological diagnosis and office treatment. Gynecology is not the real specialty it once claimed to be and the surgeon is not deeply interested in diseases of women if his knife be not allowed free course. So the poor woman who needs chiefly a diagnosis of her pelvic condition, some simple treatment there perhaps, but rather general treatment, hygienic and otherwise, is relegated back again to the general practitioner who with his common sense is best qualified to treat her—but further instruction in diagnosis will prove of infinite value to the average doctor in these cases. I took a week's ticket at Harvard in Pediatrics, devoting my whole time to this subject. Harvard has long been the Pediatric center of the world. The Infants and Children's Hospitals are models of scientific hospital construction—teaching institutions solely. The most difficult feeding cases anywhere are here studied. Diet is the chief treatment—medicine being rarely men-

tioned. The Diarrhoeal disturbances of infants are classified as

1. Nervous
2. Mechanical
(Carbohydrate
(Protein
3. Fermentative
(Dysentery
(Streptococcic
4. Infectious
5. Gas bacillus

Except in such conditions as Infectious diarrhoea it is believed in Boston that these diarrhoeas are caused by an excess or deficit of the food elements in the milk—fat, sugar, protein or salts. To handle this situation then—the percent. method is used there—tho they now **resent** strongly the imputation that there is such a thing as an absolute percentage feeding method. The stools are carefully studied macroscopically and microscopically. Cows milk and breast milk are depended on exclusively at the Infants Hospital where there are about one hundred babies below two years old. This is encouraging to those of us who have run after a multitude of false proprietary gods we must confess if honest, to little purpose. Richard C. Cabots Course, at the Mass. General Hospital—in Internal Medicine is the most virile clinic in America—compares favorably with Osler when in his prime at the Hopkins. One of the days of my visit I counted two hundred doctors. In his class were men from thirty-five states. This course is given however only in the month of July.

MORE DETAILED SPECIALTIES:

The Ophthalmologist as Contrasted With the Eye, Ear, Nose and Throat Man.

By Elmar Stebbins Waring, M.D.,
Columbia, S. C.

TRULY and often has it been said that ontogeny recapitulates phylogeny. This holds goods not only in the broadest biological sense but also in the realm of modern progress, in scientific achievement and in artistic application.

In Medicine for example, the community's pinoeer in the broadest of all specialties, Internal Medicine, and likewise in that slightly more "detailed specialty," Ophthalmology, though steadfastly ploughing a hitherto unfurrowed field must needs in a measure fashion his ideals and his work after those of his elder brothers in larger medical centers. Small wonder therefore that there should be heard throughout the nation appropriately enough a distant echo of some of the "sections" in that greatest of all medical association's meetings last June in Atlantic City.

This however, is a plea for still further specialization in medicine, and at the same time an urgent deprecation of the regional sub-division of our brother man, and the "single track-minded" manner of considering him. In a moment I shall make the plea concrete from a single point of view, that of Ophthalmology; realizing that there are others equally good.

Most older practitioners who perhaps have specialized years afterward or certainly would like to have done so, would lead one to believe that it is a sin to forego general practice. They rarely remark that it is a greater sin to take up a specialty after a few

weeks training. It never would occur to them that it is the greatest sin in a given case to undertake something about which one knows next to nothing; assuming of course that there are dozens of other men at the beck and call of this particular patient who do know considerable about it.

The more detailed a specialty, and the acme of this is the specializing in one single disease such as diabetes or tuberculosis—the more legitimately can a man specialize in it after a very brief special training. Any man gets a working knowledge of such a single disease in a first class medical school, and may get almost enough training therein by a general medical hospital appointment. The difficulty of course is to find a livable field for this detailed specialty, and it may be impossible at first to do so, relying solely on his own resources.

But Ophthalmology is by no means so detailed a specialty. It is too large a field for a thorough man to combine with Ear, Nose and Throat. It has had thrust upon it by its universality and its close and not always too pleasant relationship to Optometry and to optical instruments manufacturing a place in the lay mind of an entirely distinct entity from that of general medicine.

In that sense Emerson¹, Professor of Medicine at Indiana University says: "Possibly no specialty has become quite so special as ophthalmology. I mean that no other specialist is likely to work so independently as does the ophthalmologist." Yet he adds only too rightly: "I feel however, that no specialist should keep quite so close to the internist as should he." Under the heading "Headaches Resulting from Eyestrain," which constitutes the body of his paper, he says: "Accurately we do not know the symptoms of disease. What we call the symptoms

of disease are on the contrary evidences of defense. Evidences of the attack we may demonstrate in the laboratory. But whatever the value of sick headaches, on one point I do insist, that even though they may be the result of eyestrain they are not due to eyestrain alone but represent individual reactions on the part of patients of certain types who fight that way."

The criteria of eyestrain headaches are: 1. Pain is superficial. 2. Patient is hyperesthetic, having a hypersensitive skin, photophobia, etc. 3. No demonstrable mental reduction as in nasal headache. 4. Reflex phenomena, e. g. unilateral vaso-dilatation of temporal artery; blepharospasm; nausea and vomiting. 5. Cerebral symptoms, as light sensations of central origin; paralysis of external rectus muscle; trophic changes as blanching of an eyebrow. 6. Mental symptoms, e. g. weeping; anger in a child especially; depression most often at 5th and 6th decades in man as well as woman; dreams, etc.

"Vision is not merely a physical problem: it is more a neuromocular problem and we pay dearly for it. The muscles of the eye are small but the fatigue they can produce is certainly great. The internists now are struggling to relieve patients with neurasthenic reactions, and we ask you to come over into the field of neurologic ophthalmology and help us.

"Tonsils are no longer a local problem. The specialist in diseases of the throat has learned to discuss them in terms of heart, joints and kidneys."

"Medicine," says Hardy², "unfortunately is not free from faddism, so that dental focal infections are now having their innings."

Such expressions as that of Sir William Osler: "Know syphilis, and you know all internal medicine"; and even: "Know tuberculosis in all its

forms and you will not only know much of internal medicine but also so much more of social economy and preventive medicine";³ these have constantly to be taken *cum salis grano*. This by no means precludes the propriety of a man's taking one of these diseases either from the broad medical or surgical angle or from that of some regional and well-defined specialty, and riding it as his pet hobby.

It matters not if the field of one man's specialty overlaps or infringes on that of another. Let it be so with the best of cooperation and harmony. Would that each ophthalmologist was as interested in pupillary reactions as is the internist or the neurologist! Would that he measured pupils with a caliper, and if there were any inequality, determined, as is always difficult, the cause by instilling cocaine, then eserine, then homatropine, and again eserine to hasten the return to normal eye-use and comfort! Would that he invariably tested intra-ocular tension with an instrument of precision and found it normal before using a forceable mydriatic!

Would that he always recalled the admonition of the late Dr. John Murphy: "Gentlemen, please remember that a diagnosis is made with cortical cells, not with instruments. Then how many more cases of stimulative or depressive irritation by pressure on a sympathetic nerve, or functional or organic derangement of an oculomotor nerve would be found in time to relieve, and how many more cases of glaucoma might be benefited by early diagnosis or operation:

Why leave it to the comparatively rare neurologist, and more often and so much later to that probably rarest of all specialists, the neurological surgeon, to elicit Wernicke's hemianopsis pupillary reflex in cases of homonymous hemianopsia, thereby localizing

the lesion as back of the geniculate body on the opposite side. Would not fewer cases of brain tumor or abscess continue to walk undiagnosed in our very midst?

At Camp Greenleaf a special board of professional experts examined every medical officer who had been reported by the Surgeon-General's Office as presumably qualified for a specialty. Table 3 is quoted in part.

Table 3—Results of Examinations of Alleged Specialists:

Table 3 Result of Examinations of Alleged Specialists:

Subject	Total	Accepted	Rej.	P. C. Rej.
Urology	118	100	18	15
Roentgen Ray	87	83	4	4.6
Neurology	10	8	2	20
Neurosurgery	11	10	1	9
Otolaryngology	79	24	55	70
Ophthalmology	68	35	35	51

Thus Ophthalmology made far the poorest showing with the exception only of its ready divorceable twin Otolaryngology.

Solution:

The war now happily ended, began permanently to revolutionize many sciences, and among them medicine. For the first time the specialist in medicine and surgery was recognized in the army and navy. Needless to say this recognition has come to stay. The number of medical schools in this country has dwindled to half, i. e. to 85 within the past twenty years. As a profession that of medicine has increased in numbers less rapidly than any other. 5. In 1910 there had been an increase of but 14 per cent. as compared with the general population increase of 138 per cent. since 1870; whereas there were 569 persons for each doctor in 1850.

These facts do not controvert the truth that there is a dire need for

more thorough men, for more specialists. With the universality of the motor vehicle, and the rapid approach of good roads, backed by community, county, state and nation alike, the hospital as a public institution is going to be more universally appreciated and utilized. By the time we have what every far-seeing public health worker has long realized we ought to have, viz. a county hospital in each county, we shall likewise be needing our county aviation fields, aerodromes or hangers. "Already", quotes the Literary Digest from the New York Tribune, "Dr. Frank Brewster of Beaver City, Nebraska, has purchased a J. N. 4D biplane to use in making calls on his practitioners." As distances are to be so much more shortened let us improve our community institutions so that the four or five hour journey to Baltimore or New York will not be taken by those most financially able, but rather the forty or fifty minute trip to the formerly backward state's capital of medicine.

I would not have medicine subsidized. Government ownership of public utilities can be carried to an extreme. But the papers are full these days of the plight of the low-salaried teacher and professor. This "highbrow of labor" may be driven to bricklaying but a good way to avoid this is to begin at both ends and in the middle and meet all around. With the general shaking up of the very foundation of educational systems why could not the following program be put into effect?

Practical Steps:

1. Let each doctor imbued with the scientific spirit so magnificently evinced in the army hospital laboratory, on his return to civil life connect himself in some way with a preparatory school or college. One who already

has such connections possesses a precious opportunity.

2. Have him teach his special laboratory branch more practically.

3. If there is no pre-medical course at his college or university have him urgently present the organization of such a course to the institution's trustees.

4. Have him obtain not only the sponsorship but also the practical co-operation of the local medical society.

With what result? That these institutions which in years past have barely fitted their graduates to enter medical school, now fit them who without such impetus could not financially afford the best, to have the best and more. By that "more" I mean—to go in the capacity of fellow or instructor in one especial laboratory branch, and thereby not only tuition free but also time stimulus to do some piece of research. To spend five years instead of four; devoting one whole year in the middle of the course to such vital progressing sciences as Bacteriology, Physiology, or Biochemistry.

This is practicable for the reason that whereas in the immediate past the stepping stone to the head of departments in medical schools have been along the path of Pathology, now the pendulum has swung and for the next few decades at least these stepping stones will be along the path of Physiology and Physiological and clinical chemistry. These last subjects should be taught in every preparatory school and college. Gentlemen, let us urge this policy upon those who for the community's and the nation's good can undertake it. Where are those who can undertake it? There are some in every county seat.

Bibliography: 1. Emerson, Chas. P. The Ophthalmologist and the Physician; Journal of the American Medical As

sociation, vol. lxxii, p. 1817, 6-21-19.

2. Hardy, Wm. F., Ophthalmology; Progressive Medicine (Lea and Febiger)) vol. 2. p. 303, June 1919.

3. Hawes, John B. 2nd, The Present Needs of the Tuberculosis Campaign in Massachusetts; Boston Medical and Surgical Journal, vol. clxxix, No. 4, July 25, 1918.

4. Munson, Edw. L., Brigadier General Staff; Colonel M. C. U. S. A. Washington, D. C., The Needs of Medical Education as Revealed by the War; American Medical Association Bulletin, vol. 13, No. 3, p. 212, Jan. 15, 1919.

5. Rubinow, I. M., Director of New York City Bureau of Social Statistics; The Medical Review of Reviews, New York, April 1919.

REPORT OF A CASE OF CONGENITAL HEART LESION WITH UNUSUAL ORIGIN AND SIZE OF THE PULMONARY ARTERY.

By Henry H. Plowden M. D. Charleston, S. C.

Department of Pathology Medical College of the State of South Carolina

CONGENITAL heart lesions of this type are frequently found. The case is being reported simply because of the unusual location of what is supposed to be the Pulmonary artery, and because of its excessively small size.

Roper Hospital No 17585.

Path. Lab. No. 1762-19-57.

White female child three years of age, entered Roper Hospital on Aug. 19, 1919. The tentative diagnosis was Epidemic Cerebro-spinal Meningitis, but the examination of three successive fluids from spinal punctures fail-

ed to reveal the Meningococcus.

The history as given by the child's mother failed to show any thing of importance. The physical examination was negative except for the following findings:—Very rapid heart action with a very distant systolic murmur heard best at the apex, a small area of crepitant rales just below the right nipple, and clubbing and cyanosis of the finger tips of both hands.

The child died at 12:45 A. M., Aug. 22, 1919., and permission was obtained for an autopsy, which was performed two hours later. The heart weighed 85 grams. The left ventricular wall was about one half inch thick. The aortic and mitral leaflets and the endocardium of the left ventricle and auricle were perfectly normal in appearance. The right ventricular wall was almost the same thickness as the left. The tricuspid leaflets were normal but the orifice was somewhat dilated. The endocardium of the right heart was normal. Leading from the right ventricle into the left ventricle through the inter-ventricular septum at its upper end was an almost circular opening one half inch in diameter. No Pulmonary artery could be found leading away from the heart. The only openings into or out of the right ventricle were the tricuspid orifice and the opening from the right to the left ventricles described above.

Finding no Pulmonary artery leading away from the heart, it was decided to remove the aorta in hopes that an abnormal vessel might be found arising from it. The entire thoracic aorta was removed and in removing it, the larger branches—the innominate, and the left common carotid and subclavian arteries were cut rather short. Coming off from the middle of the under surface of the transverse arch of the aorta, an abnormal branch was found. It measured one eighth of

an inch in diameter. This vessel was also cut off very short and in view of the absence of the Pulmonary artery elsewhere, we presume this must be the abnormally placed vessel.

After performing the necropsy, the mother was again questioned. She then admitted that the child turned blue and suffered from distressing shortness of breath on the slightest exertion. She also admitted that she had given birth to another child who was blue at birth

and remained so until its death three months later. The only living child, a female five years old, was examined subsequently but nothing abnormal was noted. Neither the mother nor the father remembers any cases of "heart disease" in their predecessors

NOVEMBER 1919.

Bacteriology and Pathology, Junior
...Curr. Dr. Frand Lander, Exam....
November 1919.

STATE BOARD OF MEDICAL EXAMINERS

EXAMINATION QUESTIONS STATE BOARD MEDICAL EXAMINERS

1. Stain specimen for T. B.
2. How do bacteria multiply? What is meant by the terms "Spore"—"Flagella"?
3. Discuss the *Diplococcus Intracel-* "heart disease" in their predecessors. *luaris*.
4. What bacteria would you expect to find in conjunctivities?
5. Some epidemics of diphtheria are mild, others very virulent—state bacterial cause.
6. Explain cause of rise of temperature.
7. Name the most prominent tissue changes in the aged.
8. Pathological causes of edema.
9. Describe a lung affected by Broncho pneumonia.
10. Discuss fully the blood picture of acute gangrenous appendicitis.

Pediatrics and Gynecology. Senior Curriculum.

1. Girl 8 years sick 2 weeks irregular temperature 100 to 104, pulse ratio correct, white count 12000. Lung neg, malaria, neg. Wasserman,

- neg. Widal, neg. cerebro spin., neg. throat neg. pupils normal, no rash—what is the matter and how will you correct?
2. Describe a case of scarlet fever and treat?
3. How would you handle a case of diphtheria in the country?
4. Discuss very fully, acidosis.
5. Treat enterocolitis, broncho pneumonia, scurvy, intussusception, malaria.
6. Discuss the advisability of repair of cervix from perineum.
7. Symptoms of ovarian cyst—with what may it be confused? give differential diagnosis.
8. Differentiate between right ovaritis, right pyosalpinx and appendicitis.
9. Discuss fully uterine hemorrhage and amenorrhea in nullipare.
10. Give your opinion of and your technique in using tampons—pessariesvag, douches, intra-uterine douches.

Anatomy—Junior Curriculum, Dr. J. T. Taylor, Examiner. Nov. 1919.

1. Name the ligaments of the ankle joint.

2. Describe the endocardium.
3. Name the branches of the subclavian artery.
4. With what does the clavicle articulate?
5. Name the twelve pairs of cranial nerves.

Anatomy—Senior Curriculum.

1. Beneath what points on the Anterior chest surface are the cardiac valves?
2. Where does the abdominal aorta commence and where does it terminate?
3. Name the ductless glands.
4. What constitutes the Brachial plexus?
5. What is the solar plexus?
6. Locate and briefly describe the gall bladder.
7. Name the abdominal viscera wholly covered with peritoneum; those partially covered.
8. Give the surgical anatomy of femoral hernia.
9. Describe the structure of the prostate gland and give its anatomical relation.
10. Where may the Eustachian tube be entered and how may it be found?

Practice of Medicine. Dr. Harry H. Wyman, Examiner, Nov. 1919.

1. Discuss the treatment both Prophylactic and otherwise of Pulmonary T. B.
2. Give the differential diagnosis of diphtheria.
3. What are the diagnostic symptoms of Labor pneumonia?
4. Discuss the skin manifestations in (a) measles, (b) scarlet fever, (c) small-pox.
5. Discuss briefly the etiology, symptoms and treatment of a "common cold."
6. Define the following conditions; Heart Blood, Auricular Fibrilla

tion, Hypertension, Broken Compensation.

7. Discuss the treatment of malaria of all types.
8. Discuss the treatment of *Ascaris Lumbricoides*.
9. Discuss the symptoms of *Dementia Precox*.
10. Discuss the etiology of a headache.

Obstetrics. Dr. J. R. Miller, Examiner, November 1919.

1. Describe the fertilization of the ovum.
2. What is labor? What is abortion? What is premature labor?
3. Give stages of normal labor and define each stage.
4. What is meant by position? Give four positions. What is meant by presentation; name three presentations.
5. Name most frequent causes of asphyxia in the new born and the mode of dealing with each.
6. Give a summary of the signs of pregnancy in the first three months. Give the signs of pregnancy in the second three months.
7. What effect has pregnancy upon syphilis in a subject of this disease; how does pregnancy effect tuberculosis?
8. Give outline of treatment for obstetric patient seized with convulsions.
9. Differentiate between an attack of acute appendicitis and the rupture of ectopic gestation.
10. Under what condition would you advise taking babe from mother's breast and giving artificial feeding during puerperium?

Material Medica and Therapeutics. Dr. Baxter Haynes, Exam. Nov. 1919.
Junior Curriculum.

1. In complete obstruction of the bowels what drugs are contraindicated?

2. In what conditions is camphorated oil indicated?
3. Name the medicinal uses of Dil. HCl.
4. Name the therapeutic uses of Ergot.
5. Give dose and physiological action of pituitin.
6. Give etiology and treatment of gangrene. In which cases would you operate and when?
7. What is phimosis—what is paraphimosis? Describe the operation for the cure of phimosis.
8. Differentiate between hernia and hydrocele.
9. Give technique of spinal puncture. What symptoms in a patient would indicate its needs as an aid in diagnosis?
10. Give causes of chronic ulcer of leg, and treatment.

Senior Curriculum.

1. Give your treatment of Duodenal Ulcer.
2. What is the official name of Fowler's solution? Give dose.
3. In what disease is opium used principally, regardless of pain.
4. Give the dose of hyoscin for hypodermic use. For what purpose is hyoscin used?
5. What is the dose of (a) potassium iodid, (b) ammonium iodid, and (c) Sodium iodid?
6. Mention the remedy which will arrest the secretion of milk and state how it should be employed.
7. Describe the treatment of cerebrospinal meningitis.
8. How should ophthalmia neonatorum be prevented and how treated?
9. Write a prescription for a general tonic with tincture of nux vomica and a preparation of arsenic.
10. Dosage and method of administration of antitetanic and antistreptococcal serum.

Surgery, Dr. J. H. Taylor, Examiner. November 1919.

1. Give etiology and differential diagnosis of cervical adenitis.
2. In injuries or diseases of the brain what symptoms would indicate a decompression operation?
3. Give diagnosis and treatment of acute intestinal obstruction.
4. Amputate leg just below the knee.
5. Describe the operation of tapping the abdomen in ascitis.

Chemistry and Physiology. Dr. A. M. Brailsford, Exam. Nov. 1919.

Junior Curriculum.

1. Blood—(a) constituents (b) clotting (c) functions.
2. What is metabolism—catabolism—anaabolism?
3. Define and illustrate osmosis.
4. Name the acid constituents of (1) gastric juice (2) urine (3) bile.
5. Describe the stages of deglutition.

Hygiene, Sanitation, State Medicine. Senior Curriculum.

1. What are the chief hygienic requirements for a model sleeping room?
2. How do forests benefit public health?
3. What conditions of ill health make residence in high altitudes dangerous? Why?
4. Plan a sanitary rural privy.
5. Describe transmission of disease by meat and fish.
6. How does hook-worm enter the body? Diagnosis and treatment.
7. Describe vaccination by most improved method and name complications arising from improper technique.
8. Control a typhoid fever epidemic.
9. What gases are best disinfectants? How employed?

10. What hygienic directions should be given a patient suffering from tuberculosis?

Urinalysis, Microscopy, Toxicology and Medical Jurisprudence.

Dr. A. Earle Boozer, Exam. Nov. 1919.

1. What is the reaction of normal urine? How is it noted? To what is the reaction due?
2. What are the principal pigments in normal urine? What is their origin?
3. What would be your mode of procedure in making a chemical examination of urine suspected of containing abnormal substances?
4. What are the urinary findings, both chemical and microscopical in a case of diabetes?
5. What is poison?
6. What is the antidote to practically all alkaloids? Explain its action.
7. What are the uses and dangers of chloral hydrate? How does atoxic dose affect body temperature?
8. What chemical changes takes place in the body after death?
9. In what manner may a largely distended stomach produce death?
10. What medico-legal complication may arise from an erroneous diagnosis of pregnancy?

Nurses, Dietetics. Dr. Frank Lander, Examiner, Nov. 1919.

1. Outline menu for adult suffering from chronic constipation.
2. For a laborer weighing 150 pounds, how many calories per day are required? What is a calorie?
3. Describe your method of making and serving tea, coffee, cocoa. Give reasons.
4. How much practical work have you done in Dietetics? How much theoretical?
5. How would you feed in pulmonary hemorrhage, (b) in tubercu-

losis which is being arrested; (c) in impassable stricture of the oesophagus; (d) in acute dysentery; (x) the first week puerperium; (f) What condition demands a salt free diet?

6. Give four reasons for cooking food. (b) give four methods of preserving food. (c) What substitutes for sugar can you suggest?
7. A nurse forty years old is suffering from nervous break down due to over work, anxiety and State Board Examination; what would you give her for breakfast and supper? Describe minutely the tray and your serving.
8. Prepare and administer a nutrient enema. (b) Discuss gavage.
9. Of what use in diet are salads? (b) oatmeal (c) wine (d) whiskey (e) beer.
10. Why are stale eggs unwholesome? What chemical and physical changes occur in the decomposition of eggs?

Nurses. Anatomy. Dr. J. T. Taylor, Examiner. Nov. 1919.

1. What is the conjunctiva?
2. Name the organs of the urinary system.
3. What bones form the hip joint?
4. Describe the femur.
5. Trace the blood from the right ventricle through the lungs and back to the left ventricle, naming the vessels through which it flows and what takes place in the blood during its passage through the lungs.
6. Describe the tibia.
7. Name the covering of the brain.
8. Where is the foramen ovale of the heart and what purpose does it serve?
9. Describe the course of the external Saphenous vein.

10. Name the seven openings into the pharynx.

Nurses. Practice of Medicine. Dr. Harry H. Wyman, Exam. Nov. 1919

1. What would you do in case a child had a pea or bean in nose?
2. How would you overcome the resistance of an obstreperous child who refuses a dose of medicine?
3. How would you produce emesis?
4. What would you do for a typhoid patient with sudden drop in temperature and increase in pulse rate.
5. A child 9 years old has a chill, high fever and convulsion, what would you do?

Nurses. Obstetrics. Dr. J. R. Miller, Examiner Nov. 1919.

1. Give definition of obstetric nursing.
2. How may a nurse tell when labor has commenced?
3. Define: Labor; Liquor Amnii; Interus neonatorum.
4. What is the usual or normal position of the fetus in utero?
5. What nourishment would you give an obstetric patient the first 18 hours after delivery? What nourishment would you give her the second day?
6. What are the abnormal conditions or abnormal constituents which must be looked for in the urine during pregnancy and what do they indicate?
7. Give necessary preparation for administering saline solution, (a) under the skin, (b) by the intra venous method.
8. Differentiate between true and false pelvis.
9. What is the lochia? And what would you consider as an evidence of danger in connection with it?
10. What is the normal temperature of a full time baby at birth? What

the temperature of the prematurely born baby?

Nurses, Materia Medica and Therapeutics. Dr. Baxter Haynes, Exam. November 1919.

1. What would you do for a patient who has been severely scalded with hot water?
2. What would you do for a patient who has had a poisonous dose of carbolic acid?
3. How would you make a five per cent sol. of Carbolic Acid?
4. How would you make a normal salt solution?
5. In case of a rapid rise of a temperature in a case of typhoid fever what would you do?
6. Name four different methods of the administering medicine.
7. How would you prepare and give a dose of medicine by the Hypodermic method?
8. Name two emetics and give the dose of each for a child two years old.
9. Name four, antiseptics and tell in what strength each should be used for surgical purposes.
10. For what purpose is ether used?

Nurses, Physiology. Dr. A. M. Brailsford, Exam. Nov. 1919.

1. What is the function of the blood?
2. What influences the secretion of urine?
3. Why are some new born babies blue?
4. What are the function of the skin?
5. Describe the digestion of starch.

Hygiene.

1. Describe proper clothing and care of nurse's person in and out of room during care of infectious disease.
2. Prepare a room for a child with

- scarlet fever, and give daily man-
agement of child.
3. Describe bath and clothing for
new born baby and arrangement
for sleeping.
4. Acting as a visiting charity nurse,
- give instructions to a tuberculosis
patient and family to prevent the
spread of the disease.
5. Describe a nurse's duties to pre-
vent a typhoid patient infecting
others and herself.

BOOK REVIEW

A MANUAL OF OBSTETRICS

A manual of Obstetrics, by John Cooke Hirst, M. D., Associate in Gynecology, University of Pennsylvania; Obstetrician and Gynecologist to the Philadelphia General Hospital. 12mo of 516 pages with 216 illustrations Philadelphia and London: W. B. Saunders Company, 1919. Cloth \$3.00 net.

Dr. Hirst has brought this manual up to date, and it will prove of interest not only to the students, but to the general practitioners. The illustrations are good; very much better than are to be found in most annuals.

MANUAL OF OBSTETRICS

Edward P. Davis, A. M., M. D., F. A. C. S.
Professor of Obstetrics in the Jefferson
Medical College Philadelphia.
Second Edition, Revised
Philadelphia and London
W. B. Saunders Company
1919

This is the second edition of this manual, the first one being issued in 1914. It contains 478 pages and should prove a very servicable, ready reference volume for students and physicians.

THE SURGICAL CLINICS OF CHICAGO
Volume III Number 5 (October 1919)

The Surgical Clinics of Chicago, Volume III Number 5 (October 1919). Octavo of 258 pages 91 illustrations. Philadelphia and London: W. B. Saunders Company, 1919. Published Bi-Monthly: Price,

per year: Paper \$10.00. Cloth \$14.00.

Among the excellent articles in this number are the following:

Clinic of Dr. Arthur Dean Beavan, Presbyterian Hospital.

Abdominal Tumors—Three Cases with Unusual Features	1083
Abscess of the Pancreas.....	1099
A case of Ulcertating Carcinoma of the Breast	1103

Clinic of Dr. Kellogg Speed, Cook County Hospital

Duodenal Ulcer: Problems in Surgical Management	1117
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Clinic of Major Herbert A. Potts, U. S. A. General Hospital No. 28, Fort Sheridan, Illinois

Non-union or Fibrous Union of Fracture of Jaw.....	1157
Malunion After Fracture of Jaw...	1161
Correction of Deformity Following Loss of Upper Lip and Anterior Portion of Upper Jaw.....	1163
Plastic Operation Restoring the Lower Eyelids, Making the Insertion of an Artificial Eye Possible.....	1165
Apparatus for Making Tracings of x-Ray Plate	1169

Clinic of Major Albert H. Montgomery, U. S. A. General Hospital No. 28 Fort Sheridan, Illinois

Gunshot Fractures of the Innominate Bone	1171
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Clinic of Dr. Robert H. Herbert, Presbyterian Hospital

Carcinoma of the Prostrate.....	1257
Nephrolithiasis	1265
Nypertrophy of the Prostrate Gland in a Case of Probable Hodgkin's Di- sease	1271

**Clinic of Dr. Edward Lyman Cornell,
Chicago Lying-In Hospital**

Demonstration of Obstetrical Cases with Discussion of Points in Technic. .	1297
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Clinic of Dr. Benjamin F. Davis, Presbyterian Hospital

..Fracture of the Os Calcis	1307
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MISCELLANEOUS NOSTRUM

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A more careful study of the Nostrum

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THE PHYSICIANS VISITING LIST

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The physician's Visiting List now includes an entirely new dose list prepared in accordance with the new United States Pharmacopoeia. This will prove an exceedingly useful feature, as there were many changes, improvements in standards, new drugs and other material inserted. This list gives the dose in both the apothecary and metric system and the solubility and important incompatibilities when called for. Several other new tables have been inserted, such as Isolation Periods in Infectious Diseases, Table of Mortality, etc.

Price \$1.50.

ABSTRACTS

THE COMPLEXITY AND COST OF MODERN DIAGNOSIS

It has frequently been stated that scientific medical diagnosis and treatment are a privilege accorded only to the very poor and the very rich. The recent establishment of diagnostic clinics and diagnostic institutes indicates that the principle of group practice is being recognized to a greater extent than has heretofore been the case. The general hospitals have for many years been diagnostic institutes for group practice, a fact which is sometimes not need to do so can have their ailments remembered by those who proclaim that group practice represents a new principle. The diagnostic institute of

the present day is, however, not a hospital but an ambulatory clinic, the idea being that many patients who do not care to go to hospitals and who do not need to do so can have their ailments studied at such an institution. A perusal of the charges for service made by some of these institutions indicates that while they have doubtless solved the problem of medical cooperation they have not completely solved the financial problem of the patient. The fee for a general examination is a modest one well within the reach of the average citizen who falls into neither the pauper class nor the group of the wealthy. More complicated examinations, such as are necessary in patients with obscure diseases, cost a sum which

in many instances would be quite beyond the means of the average wage-earner. The question of obtaining efficient medical diagnosis and treatment for cases of obscure disease among those who can pay only a modest fee is one of the live questions of the day. It is doubtful whether it can be met by diagnostic clinics unless they are heavily subsidized organizations along the lines of the existing dispensaries, but differing from them in the fact that a small fee is charged. Attempts have been made to meet the situation in this way, but as yet there has been no widespread effort to care for the man of moderate means. As individuals of this group furnish the great bulk of patients, some machinery must be devised which will enable them to receive inexpensive but adequate care when they develop obscure diseases.—*Jour. A. M. A.*, Nov. 22, 1919.

such a rate of increase be continued, it must result in a severe strain on the resources of Nature. Knibbs asks whether medical men in future will take a stand in favor of so colossal a population that the masses will scarcely be provided with the bare necessities of life, or will they favor birth control and a limitation of births in such a manner that the population of the earth shall never be greater than can be adequately provided for on a high plane of physical, mental and moral existence?—*Jour. A. M. A.*, Nov. 22, 1919.

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1. Knibbs, G. H.: *Census of the Commonwealth of Australia Appendix A, The Mathematical Theory of Population, of Its Character and Fluctuations, and of the Factor Which Influence Them*, Melbourne, Commonwealth Bureau of Census and Statistics, 1917.

THE POPULATION OF THE WORLD AND THE RATE OF ITS INCREASE

Every so often, sociologists and statisticians begin to "view with alarm" the rapid increase in the world's population and to predict world catastrophe as an inevitable result. Recently the statistician for the commonwealth of Australia, G. H. Knibbs, in a monograph on population, * stated some significant facts and estimates in regard to the present and the future population of the earth. Knibbs puts the population of the earth for the year 1914 at 1,649,000,000, or about thirty-nine million in excess of the estimate of Jaraschek, the French statistician, for 1910. The annual rate of increase in the world's population for the five-years period 1906 to 1911 Knibbs estimates at 0.01159, or 1.159 per cent. of the population. Should

VACANCIES IN ARMY AND NAVY MEDICAL CORPS

As stated elsewhere, there are 710 vacancies in the regular medical corps of the army and 429 vacancies in the regular medical corps of the navy for young physicians who wish to undertake this work. Under the present law, reserve officers on active duty may be continued on such duty with their consent until July 1, 1920. The departments are also permitted to assign officers for temporary service until that time. For this reason the large vacancy list does not indicate any distress on the part of the service or immediate need of men to fill these positions. However, with the passing of the emergency covered by the law, both services will require young men to fill these positions. The reason for these resignations is of course understood. It is not dissatisfaction with

the service but the fact that the increasing cost of living makes the present pay absolutely inadequate. Fortunately, there are now in Congress bills for increased pay to officers of the military service which will permit the corps to offer more attractive opportunities to interested young men, and it is likely that as soon as these bills pass—which they undoubtedly will—numerous young men will wish to avail themselves of the opportunities offered by these permanent positions. Those interested should communicate at once with the Surgeon-General of the Army or Navy, with a view to having on hand complete information so as to carry through the application, examination and appointment with the least possible delay.—*Jour. A. M. A.*, Nov. 22, 1919.

THE INFLUENZA PHOBIA

The influenza phobia has evidently not been limited entirely to this country: the following is from a recent issue of the *Medical Press and Circular*, London:

“Mostly during the past two months the public have been deluged by would-be prophets predicting that the coming winter will herald another visitation of influenza. It is needless to say that these prognostications have been limited to the lay journals. The prophetic attempt would suggest that the idea is to angle for an hour of a “I told you so” type. Or it may be that the subject fills a gap when “copy” is short. The repeated reiteration of nursery rhyme precautions against chills, exposure to cold and changes in the weather must now be boring the public, should they happen not to be

alarmed thereby. The inexpediency of all these warnings and suggestions of woes is that no one knows whether another influenza epidemic will or will not become an accomplished fact. Why then, should prophets anticipate an evil which, as far as our knowledge goes, may not materialize? Why should the public be kept on tenter-hooks by continually reminding them of something which may never happen? We learnt last week from the *Times* that there had been under treatment some cases of influenza-pneumonia, and naively the remark was added that “So far, happily, there were not many in number.” And so the ball is kept rolling to the injury of the public—of those, that is who fail to recognize that the surest way to precipitate an evil is to become obsessed in the anticipation of it.”

There is elemental truth in the last sentence. From the physician's point of view, the influenza phobia leads to the danger that he may call any respiratory complaint seen in the course of his work “influenza.” Many health authorities, reviewing the history of previous epidemics, would say that the three or four years following such epidemics were marked by recurrences of a minor character, yet there do not seem to be any reliable statistics to show that there had actually been such recurrences in epidemic form; there appears to have been more pneumonia in the years immediately following the epidemic. And that is all. To be forewarned is to be forearmed and to be prepared is to be safe but to be hysterical and look for trouble is to invite catastrophe.—*Jour. A. M. A.*, Nov. 22, 1919.

The following are abstracts of article in the issue of *The Journal*, Nov. 22, 1919.

SKIN AND DIAGNOSIS

The value of the skin in the diagnosis of many constitutional conditions is pointed out by M. F. Engman, St. Louis (Jour. A. M. A., Nov. 22, 1919). Skin diseases are usually treated outside of hospitals and their significance is, therefore, not so much appreciated. No one can properly study skin disease or understand their pathology thoroughly, unless he can appreciate all conditions relative to the case, this can only be insured in a well regulated and well equipped hospital with the cooperation of a trained internist. There are certain inherent conditions, congenital or inherited, which throw a flood of light on the patient's condition. For example, the exudative diathesis, the first symptoms of which is eczema, appear early in life and marks the infant a clinical entity. It is seen on the cheeks or body, to be followed all through life by adenoids, asthma, bronchial conditions and enlarged glands. Sensitization in infancy may be at the bottom of this condition. Improper feeding may show itself on the skin by a dry, scaly condition which may induce traumatic eczema. Heaping up of cells on the follicles about the extremities may point in early life to hypothyroidism. Presenility may be graphically shown in the disease known as xeroderma pigmentosum and indicates the prematurely senile skin. Age is indicated on the skin, as well as by the arteries, and it is curious to note how these senile changes occur in certain families. The skin on the back of the hand is always a true gauge of the wear and tear of the body. The earliest signs of approaching puberty are shown on the face by the comedo on the cheeks or nose or increased oiliness of the skin in the region, but we are often taught to look at diet here as the cause, as

well as in acme vulgaris. The intra-follicular flora of the skin is awakened to new life by some chemical change in the body. Among the blood-borne conditions reflected by the skin, Engman refers particularly to hypothyroidism, which he has had abundant opportunity to observe and of which the cutaneous symptoms are enumerated at length, such as presenile changes, erythema, myxedematous pads, loss of hair, seborrheic dermatitis, pigmentary anomalies, etc. The erythema group is always deserving of study and thorough clinical investigation. The eruption is always produced by some thing brought to the skin by the blood stream. Lupus erythematosus is frequently one of the types of the erythema group and may be accompanied by tuberculosis. Raynaud's disease is one of those conditions due often to a germ, instead of to vasomotor disturbances, as usually stated. The painted surface of the feet and palms of the hands are often aids in diagnosis of hypothyroidism, arteriosclerosis, diabetes, etc. The skin lesions only reflect, at points of irritation and frequent motion, the condition of the blood which contains cholesterol in excess—fatty acid esters which irritate and infiltrate the cells.

BLINDED SOLDIERS

Observations on 115 blinded soldiers in U. S. General Hospital No. 7 are reported by C. C. Wholly, Pittsburg (Journal A. M. A., Nov. 22, 1919). The majority were blinded by high explosives or gunshot wounds, but there were four cases of retinitis pigmentosa, two of glaucoma, and others due to various degenerative conditions and ophthalmic disorder, infections, etc. The average age of the men was 25, the oldest being 36, the youngest 17. They

were for the most part sturdy individuals. The majority of them had grown up on farms. Only three had had college training, and one could not read or write. The others averaged about the seventh grade in school. There were forty-two concussion cases, and in a few cases this was apparently the other senses were also effected in varying degree in all traumatic cases, and other senses were also effected in varying numbers of the patients. Operation was performed in twenty-five of the forty-two cases of concussion within thirty-six hours after the injury, and in some instances the operative element prolonged unconsciousness and exaggerated the subsequent mental conditions. Several of these are reported. In thirty-seven of these cases neurasthenic symptoms appeared in addition to those directly attributable to the shock. In some of these the term hysteroneurasthenia was used to characterize the emotional element figuring in the syndrome. The men were overfearful during examinations and often distrustful and querulous. Psychasthenia was discarded as a distinct entity. One of the evidences of the psychic condition observed was the ability of the man to apply himself to the study of barille, which is more a tax on attention than typewriting and in some cases it seems to cause irritation and distress. On the whole the reaction toward this study shows in fair measure the degree in which they were able to exercise their mental faculties, and was of diagnostic aid in estimating the extent of nervous shock. A small number of sturdy patients found no difficulty in sustaining the attention required. Symptoms of hysteria major were rare. In only two or three instances did the soldier at once recognize his blindness, and some did not fully do so before they reached the base hospital. The constant bandaging

and lack of pain in most cases aided to prevent this realization. There seemed to be a general blunting of the sensorium, and the mechanism of hysteria major was not liable to come into play. There was surprisingly little depression experienced by the men, and when they finally learned that their sight was permanently gone they had already become somewhat adapted to these conditions. There were a few, however, to whom the readjustment seemed especially difficult. A curious thing was that the majority of the men sooner or later, discounted entirely the loss of their eyes, and the other sense became more acute, so that they could recognize changes in their surroundings. The relief afforded by the assurance of future support removed the great anxiety which usually goes with such a affliction. Some were unhappy after discharge from the hospital.

FETAL DEATH

J. G. McQuarrie, San Francisco (Journal A. M. A., Nov. 22, 1919), reports a study of 119 fetal deaths in a series of 2,215 deliveries in the University of California Hospital, and 502 in their homes. Reckoning from the period of possibility of viability (the thirteenth week) there were ninety-seven fatal deaths. Within the restriction given, the fetal mortality was 3.6 percent. As there were two deliveries of twins, there were only 117 mothers in the series who lost their babies. A table is given classifying the causes. There were fifteen cases in which syphilis is given, all the mothers having been under specific treatment during pregnancy. These cases were diagnosed by a strongly positive Wassermann in the mother, syphilitic changes in the placenta or definite syphilitic lesions in the infant. There

were seventeen deaths from unknown cause, in ten of which there was a macerated fetus. Even classing these macerated cases as syphilitic there are still seven in which no cause could be given. Birth trauma caused thirty-six deaths, some of them probably representing inexperience, but the majority were unavoidable. There were nine cases due to prolapsed cord, one was not discovered until two pains before delivery. One pulsating cord might have been replaced and interference was not attempted in another because of a previous complete rectovaginal laceration, through which liquid feces constantly poured into the vagina. The breech cases were carefully reviewed, without seeing possibility of better result, except in one that was spontaneously delivered at home before the physician arrived. Combining the forceps and prolonged labor cases, contracted pelvis was found in seven. The patient of this type is either brought into the hospital in advance labor or else in the test of labor it gets beyond the point where ideal treatment is possible. Four of these might have been saved. One mother had been given two doses of pituitary extract before delivery with high forceps. There was no record of previous pelvic measurement. Another patient had been allowed to continue six days in labor before interference. Another might have been saved by cesarean section, and in another case three doses of pituitary extract had been given before low forceps delivery. In another twilight sleep was attempted in a woman with simple fat pelvis, labor was greatly prolonged and was finally terminated by pubiotomy, high forceps, wide episiotomy and craniotomy. In three other cases indecision and delay cooperated to cause death. There were nine cases of toxemia. There are always patients entering hospitals who

have had no prenatal care, and moreover eclampsia often occur without warning. Fetal abnormalities caused eight deaths, all being stillborn except one, a hydrocephalic child which breathed abortively. There were only five cases of prematurity, no other cause being found. Two cases of placenta praevia are reported, and among the various other causes of one or two deaths one was from previous separation of the placenta. A case of abdominal pregnancy was diagnosed some weeks before operation, but because of the difficulty with so large a fetus of controlling hemorrhage it was allowed to go over term, as it could not be saved anyhow. The mother made a good recovery. Particulars of other deaths are shown in tables, together with other items of interest such as the relation of the mother's age, greater frequency of death in primiparas, etc. The high percentage of breech presentations is noticed (24.8 per cent.). The majority of the macerated fetuses presented the breech. All the unusual presentations are given in the tables.

AMERICAN DIGITALIS

Before the war most of the digitalis used here came from Germany and Austria, a little from England. J. H. Pratt and Hyman Morrison, Boston (*Journal A. M. A.*, Nov. 22, 1919), give their results with the use of American digitalis, and review the previous literature of its experimental use. Eight samples were tested, received from Orgeon, Washington, Wisconsin and Ohio. The one hour frog method recommended by the Pharmacopeia was used. Six of these eight fulfilled the requirements of the Pharmacopeia. Later they made assays of digitalis tinctures from the drug grown in va-

rious parts of the country, from wild plants and from those commercially raised. Details are given of the results obtained by themselves and others, and the comparisons with foreign digitalis, together with data as regards climate, soil, etc. They have come to the following conclusion: "The best American digitalis, both wild and cultivated, is equal in activity to the best European digitalis. Specimens of high potency have been obtained from Virginia, Nebraska, Wisconsin, Minnesota, Oregon and Washington. The majority of samples of American digitalis examined were of low potency. No less than seventeen out of twenty-five samples of American digitalis were below the standard of strength established by the Pharmacopeia. The average strength of the American digitalis however, was greater than that of the imported digitalis we have examined. All digitalis should be tested biologically before it is gathered in large quantities for therapeutic use."

UROLOGIC SYMPTOMS IN NERVOUS DISEASES

A joint paper on the urologic findings based on the study of 500 cases of nervous and mental disease, by J. R. Caulk, H. G. Greditzer, and F. M. Barnes, St. Louis, is published in the *Journal A. M. A.* Nov. 22, 1919. They say that while the neurologic complications are constantly present and important they find no mention of them in the recent urologic textbooks. Of the significant observations, the most important of which are loss of sexual power, relaxation of the vertical sphincter, and the bladder picture as revealed by the cystoscope, the last named is the most reliable. Cystoscopic findings in central nervous disease, especially those affecting the lower segments of

the spinal cord, are so constant and characteristic as to prove their diagnostic importance. This is shown by the large percentage of cases in which they appear in the beginning, and in the many surgical diseases with bladder disturbances complicated by, or associated with, tabes. Most of the previous reports by urologists of such findings have emphasized the importance of trabeculation as being pathognomonic, without regard to the internal sphincter, while the author hold that the internal orifice is equally decisive in diagnosis. With the cystoscope in the normal position, there is a feeling of relaxation. The posterior urethra is usually more tolerant, and in definite tabetics, as is well known, often anesthetic. The first type of pronounced relaxation, with the guttering of the urethra and visibility of the verumontanum, is the characteristic and significant finding in cases of definite nerve lesions. The other type are less positive and seem to occur quite frequently, and it may be they are due to a general let-down in physical tone. The condition of the trigon is mentioned. Laterally, the trigon at its tips fans out into trabeculae, which spread out over the lateral wall of the bladder, and with this relaxation of the internal orifice of the bladder, there is usually bladder trabeculation. In the series of 500 cases observed by the authors one hundred and eighty-eight cases were studied with Dr. Francis Barnes, psychiatrist of the St. Louis Sanitarium, one of the joint authors. The examinations were made with care, without prejudice, and, therefore, the other two authors were not aware of the nature of the mental disease. There were 80 cases of paresis, 2 cases of tabes with psychoses, 9 of cerebrospinal syphilis, 13 of non-syphilitic organic brain disease, 11 of alcoholic insanity, 11 insane epileptics,

44 cases of dementia praecox, 6 of defective states with psychoses, and 12 of manic depressive insanity. Fifty per cent. of the paretics showed positive cystoscopic pictures, as did also 38 per cent. of the exaggerated knee jerks, and also 74 per cent. with absent or diminished knee jerks. It should be stated that it is claimed that 99 per cent of paretics have demonstrable spinal cord lesions, but they may not be sufficient to produce general symptoms, though still showing bladder symptoms as described. Cases of tabes with paresis were 100 per cent. urologically positive, and so were the other conditions indicating organic brain disease. In hemiplegia the picture was always positive. In alcoholism only one case of Korsakoff syndrome showed positive bladder picture. The remaining 312 cases were studied in the Washington University Medical School Clinic, at Barnes Hospital and in private practice. They comprise the routine types of organic and functional nerve disorder. Forty per cent. gave irerious history of syhhilis or positive Wassermanns, and 75 per cent. with cord lesions gave positive spinal fluid test. Of these, 46 per cent were definitely neurologic cases and in 46 per cent. of this number the diagnosis was first made in the urologic clinic. In 54 per cent. of cases diagnosed by the urologists was it confirmed by the neurologist and about 5 per cent. of unconfirmed cases have since developed nervous lesions. The diagnostic symptoms and findings are given in detail with percentages in each condition. As regards treatment, the authors say there is no type of urinary disease that has in the past received such insufficient treatment as the bladder disorders with central nervous affections. This is particularly true of tabetics. The treatment in these cases is directed by the author against syph-

hilis and is found thus most effective. The treatment of a bladder lesion, secondary to an old nerve case, must be understood to be entirely different from that following traumatism, especially in the employment of systematic catheterization. Otherwise it is similar. In the traumatic case the automatic bladder will usually develop, but in others, local treatment is essential. The authors hope that the profession will divert from the previous conception of the treatment for these patients, and animadvert to this form of therapy, which yield such relief.

FRACTURES OF THE SPINE

A series of seventeen cases of shell fracture of the spine, with observation on Kidney and bladder function, have been studied by H. W. Plaggemeyer, Detroit (Journal A. M. A., Nov. 22, 1919). The subject was taken up by the author with his full realization of the period of time that elapsed between the inflicting of the wound and his first clincial view of the case, connoting the transition from the primary shock with depression and retention to the later stages, "usually characterized as the stages of: (1) paradoxical, or passive incontinence; (2) periodic reflex micturition, or active incontinence, and (3) paralytic or complete in continence, in which latter phase evacuation of the urianary bladder is continuous, automatic and complete." It was in the later stage that the cases were called to his attention. The time after injury to his first observation of the case varied from two and a half to eight months, with a mean average time of four and a half months. All had been catheterized abroad and were infected. Many of them demanded catheterization. Under these circumstances, the author took the liberty

of doing simply cystoscopy. All cases gave a history of complete retention following injury, and the onset of incontinence varied from twenty-four hours in five cases to six months in one. This patient had an inlying catheter when admitted. Four others had apparently been catheterized as a routine. The mean average of onset of incontinence, barring these five, was forty-eight hours. The site of the lesion varied from the sixth cervical to the cauda equina, the lumbar being the site in nine cases, the dorsal in five, the cervical in two, and the sacral in one. Several of these overlapped. Rectal involvement was general and ran a course parallel to that of the bladder. Sexual desire and ability were lacking in all. None showed edema while observed. The clinical findings were practically unvarying and might be summed up as follows: 1. There was normal or hypertonic contraction of the external sphincter. 2. There was complete relaxation of the posterior urethra and the internal sphincter almost obliterated as such. 3. The trigon in six cases appeared definitely atrophic, in four it was raised. 4. The ureteral orifices were within range of normal. 5. Trabeculations were found in every case, gigantic in size, and, as a rule, transverse and coarse on the floor, rather evenly distributed laterally, and most complex about the vertex. 6. There was no case of diverticulitis or of trophic ulceration of the bladder. 7. In nearly all bladders there was general dasometer disturbance particularly marked on the flood, chiefly shown by irregular venous congestion, but in none of the cases did the author observe hematuria. The level of the lesion apparently did not affect either the functional activity of the bladder or the excreting power of the kidney. In

one case the bladder was of the typically automatic Head type, and passage of urine and feces was a completely unconscious act. In no case did the author observe hyperhidrosis on forcible distention of the bladder, nor could he, in a single case establish a history of it, though in every case except one there was a previous history of zonal hyperhidrosis. There was residual urine in every case. Dietary control was used and also phenolsulphonephthalien test. The patients were studied as to the nitrogen retention, blood urea, etc. A general picture was observed of unusually high urea nitrogen, with nonprotein nitrogen and persistent normal creatinin in the blood, balanced by a low renal concentrating power for urea, with a low output of creatinin in twenty-four hours and low uric acid output; collaterally a colorimetric curve rising, as a whole, where the retention curve falls. There seemed to be no essentially reciprocal curve between urea retention and phenolsulphonephthalien excretion. There must be some other ground than hydronephrosis for the retention phenomena exhibited. While not discussing the early care, Plaggemeyer would suggest abstention from catheterization which means sure infection. If intervention is needed, there is no contraindication to the use of the aspirating needle until incontinence is established. This will probably not be necessary if immediate resort be had to the use of general sedative with careful attention to stimulation of mass reflexes by stimulating over the hypogastric plexus and causing relaxation of the external sphincter by fatigue of the pudic nerve. These bladders do not rupture, and as they are insensate, no discomfort is experienced. The seventeen cases are reported.

CLAW FOOT

The term "Claw foot," says R. A. Hibbs, New York (Journal A. M. A., Nov. 22, 1919), is generally accepted to mean a foot with exaggerated arch, prominent metatarsals and hammer toe, with corns on the toes and callosities on the sole of the foot over the distal end of the metatarsals. It may be caused either by limited dorsal flexion, or an impairment of the intrinsic muscles of the foot, or both. If there is only the first of these causes, especially in children, the complete deformity may be prevented by restoration of perfect dorsal flexion, but when marked changes have occurred a more complicated problem is encountered. The condition is found to result from a shortening of the plantar structures holding the arch in its exaggerated form, and from hyperextension of the toes by the common extensors. The two causes react to exaggerate each other. There are two problems to be solved in these cases: first, the correction of the exaggerated arch, and second, the removal of the deforming power of the common extensors and making effective their function as dorsal flexors of the foot. Lengthening the plantar structures, by separating them from their attachment to the os calcis, makes possible the correction of the exaggerated arch by elevating the foot anterior to the astragalus. This requires a division of the common extensors and the insertion of their proximal ends into the external cuneiform bone. In cases in which there is also a serious limitation of dorsal flexion at the ankle joint, subsequent lengthening of the Achilles tendon may be necessary. The operation is described as follows: "After the usual preparation of the foot, an incision $1\frac{1}{2}$ inches long is made internally through the skin and subcutaneous tissue over the

os calcis, and with a periosteal elevator the plantar structures are separated from their attachment to the bone.*


With the exercise of force, the front foot is elevated, the exaggerated arch corrected, and the position of the metatarsals improved. Second, through a curved incision, 3 or 4 inches long, on the dorsum of the foot to the outer side of the median line, the common extensor tendons and the internal cuneiform bone are exposed*. The tendons are divided low down, and their proximal ends pulled through a tunnel in the external cuneiform bone and held there by a suture of forty-days chromic catgut. Subcutaneous tissue is closed by a plain catgut." The foot is then put in a plaster, the metatarsals being in corrected position and the toes straight, with a thick felt pad under the sole. The plaster is worn for five weeks, when it is removed daily for

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exercises an dmassage. After seven weeks the patient is allowed to walk, though massage and exercise are kept up for six weeks more. The importance of not lengthening the Achilles tendon at this time is obvious, as its assistance is a great aid to correcting the cavus but if necessary it may be lengthened after six months. The operation has been performed in twenty cases, in

fifteen on one foot, and five on both. A sufficient time has elapsed to estimate the result of the operation. Definite improvement has been shown in all. There have been no complications nor failure of the tendons to hold as replaced, no reappearance of the toe deformity or any impairment of their control. The article is illustrated.

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SIXTH—That the "Non-Specific-Reaction" of Typhoid vaccination is of no avail as a protection against the closely allied Paratyphoid infections.

Of course it is not always safe to reason from analogy. On the other hand is it not well to preserve the open mind and consider if there may not be merit in combinations of vaccines other than Typhoid-Paratyphoid, even though the immunizing response is less distinct and of shorter duration?

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FIFTY-TWO years is a long time to remain in business. Statistics show that the average life of commercial institutions is ten to twenty years. When a business house exists for more than half a century, and grows in power and influence during the entire period, one conclusion is inevitable: such a house is founded on the solid rock of integrity.

A business enterprise may endure for a time on some other foundation, but any great organization without honesty as its fundamental support is little better than sounding brass or tinkling cymbals. Its end is certain and inglorious.

Physicians who have been long in practice know that Parke, Davis & Co. have not only developed a large scientific staff to bring out new drugs and to improve old drugs, but are constantly using that staff also in the production of therapeutic agents which conform to the highest ideals of integrity.

During our fifty-two years of existence we have had just three administrations—three presidents

and three general managers. The same policies have guided us throughout. The same traditions have been uniformly observed. Today, as in previous years, it may be truthfully said that any plan to reduce cost at the expense of quality, any device to get business by other than honorable methods, any measure or consideration that is not precisely what it ought to be, is met with instant and final dismissal.

We want no benefit, no matter how great, no matter how profitable, if it cannot be gained honorably, and if after gaining it we cannot hold up our heads among our fellow-men.

We are always glad to have physicians inspect our laboratories. We invite their closest scrutiny. Those who have come here invariably go away with the conviction that our products are made on honor—that they are absolutely true to label—that what we say about them falls short of what might be said—that all sorts of precautions and checks, all kinds of tests and investigations, are employed to make them worthy of the confidence of the medical profession.

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3. *Quality.*

IN this series of "talks" we have discussed Research and Standardization. Let us now say a word about Quality.

The three subjects are closely related. The purpose of Research is to bring out new products and to improve old products. The purpose of Standardization is to establish therapeutic uniformity. Quality depends very largely upon the success with which these two purposes have been accomplished.

The house of Parke, Davis & Co. has been in existence for fifty-two years. During this long time it has steadily grown in the confidence and esteem of the medical profession.

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Because physicians knew that we were bending every effort to turn out medicinal agents of the very best character obtainable. Because quality was always put above every other consideration.

The other day our chief chemist, in talking to a group of Parke-Davis salesmen, said:

"Gentlemen, I want to tell you one thing that you may not know. I can perhaps express it best by saying that our scientific department and our commercial

department are absolutely independent of each other.

"What do I mean? I mean this—that when we in the scientific division are bringing out a new product, or improving an old one, we never pay any attention to cost. We never consider cost at all. We work on a product for months or years, if necessary, until it is as nearly perfect as we can make it. Then, when the last word is said, the cost is figured—and it isn't figured until then.

"The commercial department takes this cost and establishes a selling price. It doesn't start in at the outset by telling us that we must keep within a certain cost. It doesn't turn the product back to us afterward and tell us that we must reduce the cost. We are left absolutely unhampered, and the only thing that we must consider is the highest possible ideal of quality."

This purpose has actuated our house from the very beginning. It furnishes the reason why quality and Parke, Davis & Co. have come to be considered as synonymous terms. When physicians use an article of our manufacture they know that it is absolutely the best that science can produce.

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For the first time in the history of medicine scientifically accurate preparations were placed at the disposal of physicians. We immediately published the results of our researches and advocated the extension of chemical standardization to all galenical preparations as quickly as proper methods could be devised.

A long fight ensued. Our competitors accused us of attempting to foist a fad on the medical public. Others charged us with commercial insincerity. We were met with ridicule and opposition on every hand.

Later on, in 1897, we took the next step by adopting the principle of physiological standardization. We had found in the meantime that certain drugs

would not lend themselves to chemical assay—drugs like ergot, aconite, cannabis, digitalis, and strophanthus. So we tested them on living animals and worked out standards of potency and uniformity.

History repeated itself. We were again met with opposition from many quarters—from our competitors chiefly, of course, but from others as well. But the time came when we were seen to be right. And now what do we find? The principle of chemical standardization and the principle of physiological standardization are both recognized in the United States Pharmacopœia. Each succeeding edition of this official guide subjects an increasing number of drugs to the process of chemical or physiological assay.

As for ourselves, it may be said that today no less than one thousand and five of our products are rendered uniformly accurate and reliable through the standardization of one or more of their ingredients.

As we were the first to practice standardization, so have we always been its chief exponents, and we are today giving it the benefit of more constant study and a far wider application than any other manufacturing house in existence.

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1. Research

THE house of Parke, Davis & Co. came into existence fifty-two years ago. It is proper to ask what motives have actuated it during this long period of service to the medical profession.

Both Mr. Parke and Mr. Davis, with prophetic vision, realized from the first that if the company was ever to become big and great, it must represent some definite, fundamental ideas. It must give the world something that the world did not possess before.

What fundamental ideas did the house come to represent? One of them was research work!

Long before it could well afford to do so, the company spent thousands upon thousands of dollars in original investigation. In the early days, for example, when the vegetable *materia medica* played a larger role than it does now, we were instrumental in placing many new plant drugs at the disposal of the physician. Twenty-one of these drugs subsequently became official in the National Formulary and the United States Pharmacopœia.

Later on, in the orderly evolution of the *materia medica*, original work was undertaken in the realm of chemical and bio-chemical investigation, and this resulted in the discovery of a considerable number of medicinal agents that proved of distinct value to the physician. Of many such prod-

ucts we need mention only Adrenalin, Pituitrin and Apothesine to suggest the importance of these introductions.

During the last twenty-five years our researches have been especially devoted to subjects in the field of biological and glandular therapy. As early as 1894, indeed, we established a laboratory for the production of antitoxic serums, and since that time we have developed a research staff unequaled by any other commercial organization, and unsurpassed, perhaps, by any agency in the realm of medical investigation.

It is not our purpose to enumerate the new vegetable, chemical, biological and glandular products that we have introduced to the medical profession from time to time. Our object is merely to indicate the part we have played in the development of the *materia medica* during the last fifty-two years.

From the very first we have dedicated ourselves to original investigation. And not always has it been the object of our research work to turn out marketable products. We have frequently spent large sums in exhaustive investigations which in all probability would never lead to any commercial advantage, but which were undertaken with the primary desire to be of service to the medical profession and to humanity.

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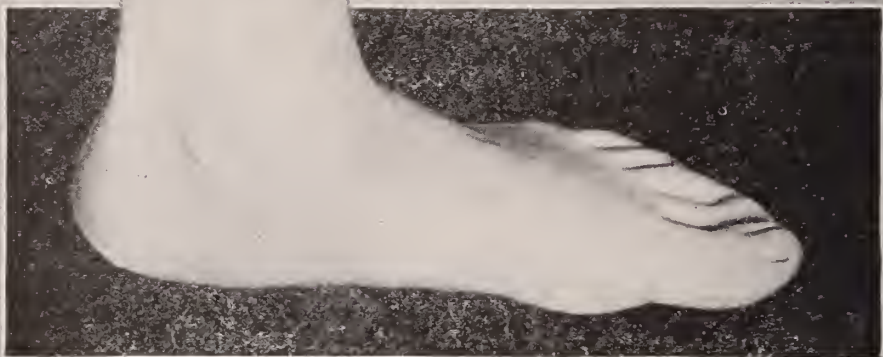
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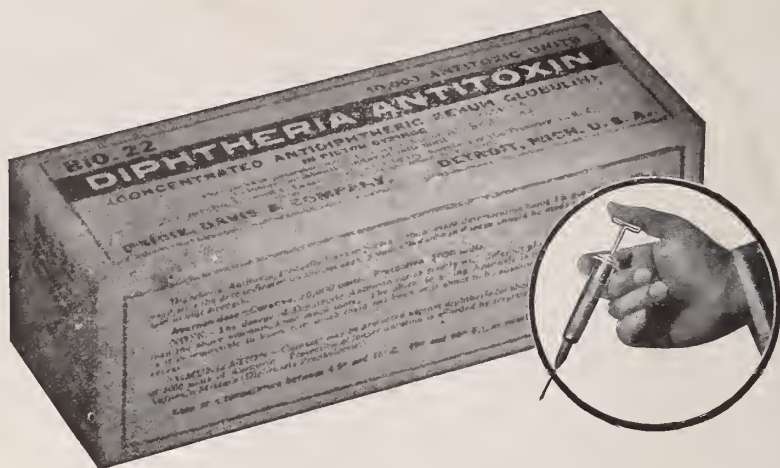
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ONE in every ten cases of Diphtheria in the United States terminates in death, according to the New York City Board of Health. This high death-rate can be materially lowered by the early administration of large doses of diphtheria antitoxin. The average dose employed at the present time is 5000 units. Authorities assert that it should be 10,000 units.

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The Journal

OF THE

South Carolina Medical Association



VOL. XV.

GREENVILLE, S. C., NOVEMBER, 1919

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THE HOUSE WITH A POLICY

6. *Our Research Equipment.*

WE end this series of talks, as we began it, with a reference to our research equipment. For research, after all, is the fundamental doctrine in our creed.

Our principal function is to coöperate with the physician by placing at his disposal for the treatment of disease the most effective medicaments which science can produce. These medicaments may be old and familiar agents, in which case our purpose is to bring them up to the highest pitch of improvement. Or they may be entirely new contributions to the materia medica of the day. In either event continuous research and experimentation become imperatively necessary.

And so, as the years have rolled on, we have gradually built up a Research Laboratory of which we are proud. It stands out on the bank of the Detroit River, apart from our main plant, and its very isolation typifies the spirit of the enterprise. Here our investigators are surrounded with the true atmosphere of research work. They may spend months and even years in the completion of a given task, and the only obligation is that they shall do it conscientiously and well.

Physicians who visit our plant for the first time are invariably astonished at the size, scope and character of this Research Laboratory. They are surprised that we have such an equipment. They are amazed that a commercial house can be so thoroughly dedicated to the ideals of science. They ask us why it is that we have never adequately told the medical profession what we are doing, and always have been doing, along the lines of original investigation.

At the present time our research work is separated into sixteen sections. Over each section is a man of specialized training, and he is frequently of national and even international reputation. Each investigator has one or more technicians and other assistants, and altogether there is a research staff of about seventy.

The work is exceedingly varied in character. It covers the fields of pharmaceutical chemistry, biological chemistry, nutritional chemistry, bacteriology, pathology, physiology, cytology, parasitology, pharmacology, and the like. The task ramifies from year to year. It becomes more and more complex. And the future will doubtless witness a far greater development than the past has shown.

PARKE, DAVIS & COMPANY

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It means that 2400 physicians in the United States are coöperating with us daily in testing out new products. In this group are to be found many of the ablest specialists and general practitioners in the medical profession of America.

A new chemical synthetic, biological product, glandular agent, or pharmaceutical preparation, developed in our research laboratory, is first subjected to thorough animal experimentation, and then we turn the product and the laboratory data over to one group or another of these skilled men. The product is tried out thoroughly at the bedside and in the hospital, and sometimes two or three years of exhaustive experimentation is conducted before we

attempt to say whether or not it has justified itself.

These physicians coöperate with us in the interest of medical science. They are not paid for their work, and their names are never used. Our relationship with them is one of supreme confidence on both sides.

If this expert jury decides that a product is valueless, that product is promptly discarded, even though thousands of dollars and years of time may have been spent in its development. If, on the other hand, it is found to be one of great usefulness, then we are prepared to go before the medical profession feeling that we have something which we can offer with every confidence in its therapeutic efficiency.

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